The Journal of the American Medical Association

Published under the Auspices of the Board of Trustees

Vol. XLII. CHICAGO, ILLINOIS, MARCH 19, 1904. No. 12.

Original Articles.

THE TREATMENT OF LOBAR PNEUMONIA.*

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When a disease becomes so prevalent and so serious as pneumonia is at the present time, it is helpful to compare our personal experiences in coping with it, and even though there be no new methods of treatment to advocate, it is well to revise existing methods, if only for the sake of indorsement or confirmation.

THE GENERAL PURPOSE OF TREATMENT.

However diverse the methods employed in dealing with this disease, they all have substantially the same aim, namely, to maintain the efficiency of the heart, which, through a brief period of a self-limited infection, is subjected, in one way or another, to most severe and unusual strain. The guiding of the heart's action is, therefore, the question of paramount importance at the outset, and yet it is precisely this feature of the treatment which is most difficult to formulate satisfactorily, for it can not be successfully conducted by rule and routine. Each case must necessarily present its own problems and evoke the judgment and skill of the clinician to the utmost. Thus, in sthenic cases, with a full bounding pulse, and every evidence of a vigorous heart irritated into too forceful activity by a sudden toxemia, aconite may prove a most useful remedy for the first 24 or 36 hours, but not longer, for as soon as the heart action becomes less tumultuous, it is best to avoid interference, and wait for the first evidence of heart exhaustion before commencing stimulation. The return to venesection in such cases, which has been advocated of late by certain clinicians, does not appeal to me as either necessary or wise.

CARE FOR THE CARDIOVASCULAR SYSTEM.

The essential factor throughout is to maintain the proper balance between heart and vessels, between the intensity of the heart sounds and the force of its impulse, and the volume and force of the pulse. Thus in one case strychnin may prove the best form of cardiac stimulant, because it also improves the vascular tone, in another digitalis is better, combined with nitroglycerin, to relax the peripheral vessels, and in yet another strophanthus, caffein or alcohol may prove the better remedy. It is a great mistake, albeit a very common one, to overstimulate a heart which if left to itself would act well enough, and when stimulation has produced a marked improvement in the two great factors of the circulation (the heart force and the pulse tension), it may often temporarily be reduced or even withheld for some hours to advantage.

It is for these reasons that I much prefer to make frequent changes in the form as well as in the quantity of cardiac drugs employed, and it would seem an equally narrow view of the question to assert, for example, that digitalis should never be prescribed in pneumonia, as that nitroglycerin should invariably be used throughout. It is sometimes stated that heart stimulants should necessarily be given to anticipate sudden great weakness, but, except in the aged and those previously much debilitated, this emergency is seldom so sudden that it can not be foreseen and met by the very prompt action of hypodermic remedies. In fact, in any critical case strychnin, nitroglycerin or the tincture of digitalis are all best administered hypodermically, for their absorption from the stomach is not only slow, but unreliable during fever. In case of sudden cardiac dilatation, or threatened collapse, camphor and ether or alcohol, given hypodermically, prove invaluable, and the influence of salt solution, as subsequently mentioned, reacts most favorably on the heart and vessels. In this connection it has frequently been a surprise to me to follow the course of pneumonia in patients having serious organic heart lesions, especially of the mitral valve, and note how tolerant such a heart may be of this infection when not overstimulated by drugs.

TEMPERATURE.

When the temperature rises above 103 F. a cold alcohol sponge bath may occasionally be given, but, except in dealing with hyperpyrexia, it is unnecessary to be as insistent on this treatment as in typhoid fever, and too frequent bathing may disturb the patient and influence the pulse and breathing unfavorably. With a temperature above 105 F. the cold wet pack should be resorted to. My experience with a number of cases treated by the cold tub bath was so unfavorable as to lead to the abandonment of this method some years ago.

ALLEGED SPECIFICS.

During the past two or three decades there has been a constant succession of remedies advanced as so-called "specifics" for pneumonia, but their very number is proof that their alleged value has not been recognized by the profession at large, and the literature of the subject affords instructive if not encouraging testimony as to their futility. It is comparatively easy in a certain locality or during a particular season to collect data of a considerable number of recoveries from pneumonia which may be attributed by enthusiasts to "specific" lines of treatment. but the natural course of uncomplicated cases occurring in those of fair constitution is brief, and it is well known that the disease varies widely in severity at different

* Read before the New York County Medical Association.

times and in different regions. At the Presbyterian Hospital in New York City during the past decade more than 12 per cent. of all cases of pneumonia have resulted in recovery without any medicine whatever, and the large majority of remaining cases which have terminated favorably have been treated symptomatically, although some of the so-called "specifics" have been given fair trial, such, for example, as large doses of carbonate of creosote, antiseptic inhalations, antipneumococcus serum, etc. Yet the mortality from the disease in that hospital does not vary one way or the other from the general average elsewhere. My personal experience with the creosote treatment in that institution, as well as in the severe alcoholic type of pneumonia which prevails in Bellevue Hospital, has not been convincing, and I have very little faith in its efficacy. It is extremely doubtful, also, whether any form of antiseptic inhalation can act as a prophylactic against the extension of a pneumonic process, much less penetrate an already consolidated lung. I would not be understood as denying the possibility of combating the disease by some specific mode of treatment, but until such remedy can be demonstrated to exist to the satisfaction of the medical profession at large, by repeated successes under varying conditions, it is well to check the enthusiasm born of meager experience, which tends especially to impress the laity with delusive hopes.

Ever since the advent of the grippe in 1890 there has been increased talk of "aborted" pneumonia, i. e., pneumonia cut short by drugs, and there have been many cases this winter the behavior of which as regards their limited physical signs and duration has been, to say the least, atypical, but other germs than the pneumococcus are capable of producing these phenomena, and I have never been convinced that a genuine pneumococcus lobar pneumonia, the original "croupous" or "fibrinous" pneumonia, with all its definite characteristics, can be systematically cut short in full career by any system of treatment at present at our command. There are plenty of mild cases to be seen to-day of influenzal type, in which there is a suspicious patch of apparent consolidation at the base of one lung, or elsewhere, which terminate in resolution of their own accord in two or three days, but these are not the subject of the present discourse. In discrediting any "abortive" treatment of pneumonia I would go still further and discountenance wholly the use of certain drugs which have been strongly recommended, such as the entire coal-tar series and jaborandi or pilocarpin, which I have known to produce edema of the lungs in very short order.

THE USE OF ALCOHOL.

Probably no phase of the topic under discussion has incited more controversy than that of the use or abuse of alcohol. My own tendency is to use it much less abundantly than formerly, and not at all as a routine practice. Many patients do best without it, but with a feeble dicrotic pulse, a dry tongue and a profoundly asthenic condition, it is best to give it, perhaps, to the extent of from four to six ounces of whisky or brandy in the twenty-four hours—seldom more than this. To the aged, alcohol should be given early in moderate dosage, and also to alcoholic subjects. I am aware that there are those who do not prescribe it, even for the latter class of patients, but in the wards of Bellevue Hospital, where the majority of all pneumonia cases are met with in more or less strongly alcoholic subjects, I have repeatedly tried to give it up altogether, but have felt impelled to return to it. As a hospital interne, I have seen whisky given at the rate of an ounce an hour—24 ounces in the day—to patients of this class, and was taught that it was doing good so long as it kept the tongue moist and improved the quality of the pulse and that it was a necessary routine remedy; but the general belief in this regard has been considerably modified, and with the exceptions above noted, it is best to withhold alcohol until there is decided evidence of failing heart action.

EXPECTORANTS.

If a comprehensive statement is to be made in regard to the employment of expectorants in pneumonia, it had best be said that in general they are contraindicated. Many patients do well whose expectoration is trifling—perhaps not more than a few drams throughout, and the symptom is of no prognostic import one way or the other. Expectorants, moreover, are prone to disorder the stomach and interfere with the proper assimilation of nourishment, stimulants and other medicines. There are but two theoretical grounds for their use, first to rid the system of possible toxic material from the pneumonic area of the lung proper, and, second, to rid the bronchi of tenacious secretion which might lessen their lumen and render breathing in the normal lung more difficult. In regard to the first of these factors, during the period of dense consolidation when the patient is usually at his worst, there is but little material capable of expectoration from the solidified lung, and it is not to be expected that the trifling amount of toxic substance which sputum might contain is of any importance in comparison with the main toxemia of the system. The effort of coughing is both exhausting and painful to the patient, and attempts to increase it at this period are not advisable. As the pneumonic exudate softens, the patient is usually far on the way toward defervescence or even convalescence, and it makes little difference whether the exudate is reabsorbed or expectorated. With regard to the second factor in those cases in which there is a somewhat copious tenacious bronchial secretion, the efforts at frequent coughing may prove very exhausting, and although this secretion is presumably incapable of adding to the general pneumonic toxemia, it may be well to aid its removal with one of the ammonium compounds, such as the chlorid or carbonate in some simple cough syrup, like that of wild cherry. In those exceptional cases in which the bronchial secretion is very abundant and partakes of the nature of a bronchorrhea, it may be preferable to attempt to lessen it with small doses of atropin sulphate (gr. 1/200), and by the use of a large mustard paste or of dry cups applied anteriorly when the patient is too ill to be turned. This latter treatment, the atropin and mustard or cupping, is to be recommended also whenever pulmonary edema supervenes.

THE GASTRO-INTESTINAL TRACT.

Gastro-intestinal disorder should receive especial attention in prophylaxis and treatment. The disorder is usually more pronounced in the intestine than in the stomach and has a twofold effect: (1) Mechanical, through abdominal distension or rigidity which embarrasses the respiratory movements; (2) toxic, through absorption of products of malfermentation. The common initial dose of calomel should not be omitted, and the bowels should be subsequently kept active with a non-effervescing saline laxative. Tympanites in pneumonia is as much to be dreaded as in typhoid fever, and

should be similarly dealt with by temporarily changing the diet from milk to broths and egg albumin, the administration of salol and a laxative, the use of turpentine abdominal stupes, and the giving of a stimulating turpentine enema, or passage of the rectal tube to promote expulsion of flatus.

Although no special variety of indigestion characterizes pneumonia, the tongue is often foul and the high temperature and toxemia inhibit or alter the normal digestive secretions, and passage of more or less feculent and fermenting stools is common. The symptom of persistent hiccough is most serious, and I have rarely known a patient to recover who presented this complication, for it seems to be due rather to central than local irritation, and can, therefore, only be relieved by anodynes, the use of which may prove deleterious in other ways. In the control of intestinal putrefaction, the main reliance should be placed on laxatives and such antifermentative remedies as salol. Irrigation of the bowel usually is too disturbing to the patient to be undertaken. It is very desirable to insist that the patient drink as much cool water as possible, although this often becomes difficult owing to the presence of delirium or the interference which repeated swallowing produces with respiration.

DELIRIUM.

The control of delirium in pneumonia may become a serious problem, whether it be due to alcoholism or to the disease itself. In mild cases, mild remedies should be first tried, such as the bromids, codein or trional. The latter is a very safe, non-depressing remedy in moderate doses (gr. xv-xx), and it acts particularly well in conjunction with codeia. I have seen serious conditions result from the giving of even small doses of morphin in the delirium of pneumonia. Less than a quarter of a grain may sometimes produce marked increase in cyanosis, and irregular or Cheyne-Stokes breathing. If used at all, it should be combined with atropin and some form of heart stimulant. When the delirium is the outcome of hyperpyrexia, it may be controlled to a large degree by the cold wet pack. With a severe alcoholic delirium or maniacal delirium from any cause, the problem is quite different. The patient is particularly liable to have delusions of persecution and attempt to escape, or he is constantly exhausting himself by shouting and violent jactitation. In such a predicament the only possible chance of recovery lies in preventing the exertion which may culminate in acute dilatation or other enfeeblement of the heart. Paraldehyd, hyoscin hydrobromate and morphin may all in turn have to be used, and in dosage which one does not like to be quoted as recommending, for fear of misinterpretation. The importance should be emphasized of giving digitalis or some other heart stimulant when large doses of depressing hypnotics are required for emergency.

OXYGEN.

The value of oxygen inhalation has been much discussed. The gas is expensive, is easily wasted, and it has acquired so much unfortunate newspaper notoriety that the popular impression prevails that it is used only as a last resource, when all else has failed. In many cases it is certainly of doubtful utility and fails to make any impression on either cyanosis or the embarrassed respiration. Nevertheless, I believe it is often of distinct service, and I do not like to treat a severe case without it. It often relieves subjective dyspnea, and thus has a mildly, soothing effect on the patient; and there are not a few cases in which it produces improvement in objective symptoms as well. It should not be left until the patient is *in extremis*, but, if administered at all, it should be given early and abundantly, and the nurse should be cautioned not to let the patient increase his exhaustion by voluntary efforts at deep inhalation of the gas, or its benefits will be neutralized. It is difficult to explain its value under the laws of the physics of respiration, for there is much unused oxygen returned in the exhaled atmospheric air of normal respiration, but the atmospheric air immediately surrounding a rapidly breathing pneumonic patient is none too pure, and if oxygen acts in no other manner, it certainly supplies a chemically pure air in convenient form without draft or chill. In this connection the importance of maintaining the air about the patient as pure as possible should be emphasized. Gas and kerosene stoves, unnecessary gaslights, like the lungs of anxious friends who insist on crowding into the sick room, not only consume much oxygen, but vitiate the remaining atmosphere with carbon dioxid and other noxious material. In excluding members of the patient's family from the room, it is well to explain to them that this is done, not alone on the ground of securing absolute quiet, but also to insure purity of the atmosphere.

HYPODERMOCLYSIS.

Of recent years the treatment of hypodermoclysis has added a valuable therapeutic measure. In most cases it is to be preferred to direct venous infusion, as the salt solution used is thrown more gradually into the circulation. It has been objected that this method of treatment is liable either to produce pulmonary edema or to injure an already overtaxed heart by increasing vascular tension; and, further, that the small volume of fluid, i. e., relatively small as compared with the total volume of blood in the body, can not dilute the toxins present in the circulation to any appreciable degree. These objections appear to me somewhat theoretical, for with considerable experience with hypodermoclysis in pneumonia, I have yet to see any ill effects follow it. On the contrary, in not a few desperate cases, I have known it to save patients who seemed past every hope of recovery. When the respiration is shallow, intermittent and irregular, cyanosis is extreme, the pulse is scarcely perceptible, and there is coma and complete asthenia, the hypodermic injection into the flanks of 1,000 or even 600 c.c. of hot (110 F.) normal salt solution (0.6 per cent.) will sometimes produce a surprising response, and enable the patient to rally for an hour or two, when the procedure should be repeated. The rectal injection of salt solution may also prove of great service.

LOCAL APPLICATIONS.

Topical applications to the chest wall should be made with the view of promoting the comfort of the patient rather than with any idea of influencing either the inflammation or circulation in the lung. For many years I have given fair trial to all manner of applications to the chest wall, hot poultices, ice poultices, ice packs, mustard pastes, cold wet dressings, the pneumonia jacket of cotton or flannel reinforced by oil silk, and the like, but without acquiring the belief that they have the slightest influence on the course or outcome of the disease. At one time I made a series of experiments to determine the depth at which external thermic agents, both hot and cold, could be made to locally modify deep-

seated body temperature. Selecting several patients who had long sinuses resulting from chronic empyema which had been operated on, I inserted specially constructed long-stemmed thermometers for a depth of from six to eight inches into the thoracic cavity. Poultices as hot as could be borne (in some instances at 130 F.) alternating with ice, were applied over the chest wall, but in no instance was the temperature of a deeply inserted thermometer capable of modification more than one-eighth of one degree F. By similar experiments repeated on the cadaver, however, the intrathoracic thermometers were decidedly influenced. The conclusion is justified that so long as the superficial cutaneous circulation is maintained, the constantly moving blood conveys away either the heat or cold of any external application, thereby preventing a deep-seated organ, like the lung, which also has an independent vascular supply, from being influenced.

It can scarcely be maintained that any deep-seated reflex effect called into play through external applications of heat or cold independently of direct transmission of thermal units, is capable of controlling an inflammatory process in the lung. I have emphasized this matter, because it has never seemed to me that any form of topical treatment of pneumonia can influence the lung itself. Such treatment is, however, of great service in relieving those patients in whom pleuritic pain is an important feature. As a rule, heat is more soothing than cold, but there are many exceptions, and one sometimes sees patients who have been made most uncomfortable by being half smothered in heavy hot poultices, the frequent renewal of which produces serious disturbance. Strapping the chest with adhesive plaster, although it relieves the pleuritic pain, materially interferes with careful physical examination of the lung. For the reasons above given, it is my custom to employ no topical applications at all, unless called for by excessive pleuritic pain, when the choice between the use of heat or cold should be decided by the patient's comfort, rather than by routine.

HYGIENE.

The general hygienic treatment of pneumonia is substantially that of typhoid fever, and I shall not take time for its discussion here, for it involves questions which are much less the subject of controversy than the use of drugs. As for diet, with high fever and tongue dried by mouth breathing and heavily coated, milk constitutes the best food, but under more favorable conditions considerable variety may be allowed, and such articles may be given as broths, egg albumin, beef juice, orange juice, kumiss, junket and palatable gruels of various kinds. The care of the mouth should receive as much attention from the nurse as in typhoid fever, for a foul tongue promotes the indigestion which has been above referred to as so injurious, besides making it difficult to swallow, and adding much to the discomfort of the patient. The usual mouth cleansing with hydrogen peroxid and mild antiseptics should be performed.

THE IMPORTANCE OF REST.

Overzeal in the treatment of pneumonia is, I think, more to be criticised than anything else. This includes overstimulation of the heart, overuse of expectorants, and above all incessant "fussing" about the patient, who, in the well-intentioned but ill-advised efforts of his care-takers, is often allowed scarcely ten minutes in the day for repose. I was lately called to see a physician in desperate plight with double pneumonia, whose brother practitioner was giving him frequent stimulating hypodermic injections, whose nurse was constantly administering expectorants and stimulants in the intervals of renewing poultices and supplying oxygen, whose wife was aiding by giving cold sponge baths literally every fifteen minutes (!), and whose anxious family were frequently looking in at the door to inquire how he felt.

It takes some courage and much experience not to overdo in the treatment of pneumonia. There is no other disease in which the idea of combat against the elements of death presents so active and intense a clinical picture. The picture changes from hour to hour, the time for combat is brief, and no matter how severe the odds against life may appear, there is always a chance, what one terms the "fighting chance," up to the patient's very last breath. Hence, the temptation for active interference may outweigh one's calmer judgment, and the patient may lose through exhaustion that modicum of strength which might at the last moment have turned the balance in his favor. It may seem somewhat trite, but experience shows that it is not so, to insist that proper intervals of absolute rest, of two or even three hours, should constitute a definite part of the treatment. The giving of medicines, food and stimulants, as well as all remedial measures, should be so carefully outlined for the nurse that there be no mistake on this point, and during each twenty-four hours there should be several such periods for rest prescribed. An hour's sleep will often do more to save the patient's life than all the medication he has received throughout the disease, and there are times when it should be remembered that "they also serve who only stand and wait."

CONCLUSIONS.

I am well aware that there is much more to be said regarding the treatment of pneumonia, but I have purposely confined these remarks to the emphasis of what has seemed most satisfactory in my individual work, leaving for others the expansion of the topic. It has always seemed to me that good nursing and the exercise of constant watchfulness should outweigh polypharmacy and specifics.

In closing this brief outline of treatment, I would emphasize certain conclusions as follows:

1. The importance of not crowding an overtaxed heart with too much stimulation, and especially of basing the selection of the proper variety of cardiac stimulant on the existing balance between the conditions of vascular tone and the effort the heart is already making.

2. The uselessness of the so-called "specifics" for pneumonia, and, as a rule, of expectorants.

3. The importance of prevention of indigestion and particularly of tympanites.

4. The great value of hypodermoclysis in certain cases.

5. The uselessness of topical applications excepting for the purpose of relieving pleuritic pain.

6. The necessity of prescribing proper intervals of rest in which the patient is free from incessant efforts at medication.

DISCUSSION

DR. GEORGE L. PEABODY believed that intelligent symptomatic treatment was the general attitude of the profession. In violent, uncontrollable, maniacal delirium the cold bath acted very well as a sedative, and he had no doubt that he had often saved life thus when death seemed imminent. A confusion of

ideas exists regarding morphin. It does not affect the peripheral but only the central respiratory act and, in pneumonia, the central respiratory function is not at fault. He prefers paraldehyd or amylene hydrate to sulfonal or trional when a hypnotic is needed. It can be given in peptonized milk or by rectum, and a large quantity of the vehicle should be given. For some time past he has been treating cases of pneumonia with salicylates, preferring aspirin because better borne by the stomach. He has so treated 60 or 70 consecutive cases and aspirin certainly had an influence on the disease as proved by the fact that defervescence took place by lysis in 32 per cent. of the cases. He was skeptical regarding any so-called abortive treatment. He looked on hiccough as a bad symptom. If severe and persistent, with high arterial tension, inhalations of amyl nitrite have given him good results. He advocated oxygen if used early and abundantly before signs of cyanosis appear. Locally he approved of the electric warm pad.

DR. L. A. CONNER said that the treatment at the Hudson Street Hospital was purely symptomatic; unless stimulants were really demanded the patients received none; diet was milk, and an abundance of water was given. Not one-quarter as much alcohol is given now as three or four years ago, and without less satisfactory results. During the past two years one-half the patients with pneumonia had been placed on carbonate of creosote, and he hoped eventually to be able to present some statistics regarding the effect of this agent. Emphasis was laid on the importance of watching the abdomen, especially the tympanitis, which was more serious in pneumonia than in typhoid fever. Turpentine stupes were applied frequently and colon irrigations of hot and cold fluids, administered alternately, seemed to give the best results. Pulmonary edema was best treated by dry cupping frequently done.

DR. CHARLES E. QUIMBY believed that keeping a uniform temperature to the body surface had a beneficial effect on the circulation in the lungs. Dry cough could be often relieved by dry friction. He thought it wise to have the temperature of the room above 80 degrees at all times, and the air full of moisture.

DR. MORRIS MANGER thought that the statistics from the Massachusetts General Hospital, covering nearly 100 years, showing an average mortality of between 10 and 11 per cent., were not reliable because they exclude pneumonias occurring in the young and aged. Wells' statistics, amplified by Osler, give a more correct mortality of 20 per cent. These latter statistics were taken from all over the United States, and embrace 255,000 cases. The routine examination of the abdomen he believed to be of more importance than the routine examination of the lungs. Paralytic distension of the bowels was not alone due to the intestinal contents, but also to a septic process. Cases in which there was no relief of the tympany were beyond the reach of local treatment. He cautioned against the use of even mild cathartics in abdominal distension, especially when of septic character. Venesection he believed to be of value in some cases, especially sthenic. Guaiacol had been of value in his hands in catarrhal pneumonia associated with grippe. Sodium salicylate seemed to act well in children. He did not use morphin in pneumonia, although tentatively he had tried heroin, but without satisfactory results.

DR. EDWARD W. LEE emphasized the importance of hypodermoclysis, especially in pneumonia, following operation.

DR. ALEXANDER LAMBERT referred to ergot as an equalizer of the circulation, constricting the dilated blood vessels; he had used it with benefit in alcoholic and other pneumonias, in the tympanitic distension in both adults and children, and in edema of the lungs, especially when associated with dry cupping.

DR. GILMAN THOMPSON said that pneumonia often followed surgical operations because of the lowered vitality. The pneumococcus was present in one out of every five normal mouths, so that the opportunity for the disease to develop was always present under certain circumstances. The respiratory difficulty was the result of the action of toxic material contained in the blood acting on the respiratory center in the medulla. This was proved by the fact that defervescence occurred the cyanosis cleared up, etc., when the lungs were not yet entirely resolved. The dyspnea was distinctly of central origin, and due to the poison contained in the blood. If the cerebral centers were overwhelmed with the poison morphin would then be injurious.

TUMORS INVOLVING THE CAUDA EQUINA,

WITH REPORT OF CASE.

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Tumors involving the cauda equina or causing symptoms by pressing on the cauda may have their origin either within the contents of the meninges, i. e., in the nerve trunks of the cauda or in the meninges themselves, or in the structures outside of the dural sheath, especially in the vertebral column.

Tumors having their origin within the cauda itself are not numerous. In a case reported by Volhard,[1] with typical symptoms, a diagnosis of neoplasm of the cauda equina was made and operation decided on, but the patient came to autopsy before it could be performed. A glioma was found close below the conus medullaris, compressing the roots of the cauda against the lumbar vertebræ.

A second case was reported from the service of Dejérine[2] at the Saltpetrière in 1895, and presented the symptoms of compression of the cauda equina. Operation was attempted by Chipault, but was unsuccessful, and the patient died three hours after the completion of the operation. A small-celled sarcoma of the cauda equina was found. Neurofibromatosis of the cauda equina occurs in connection with neurofibromatosis of other parts of the nervous system. Five cases were collected by Thomson,[3] and reported, respectively, by Hürthle and Nauwerck,[4] Küpferberg,[5] Leboucq,[6] Nélaton, Houel,[7] and Soyka.[8] Two cases of malignant growth, one a sarcoma of the cauda equina fibers, the second a fibrosarcoma, situated between the strands of the cauda are reported, respectively, by McCosh[9] and Fränkel.[7] In the latter case, the involvement was unilateral, the mass confining itself to the fibers coming from the left side of the cord.

Cases in which the growth springs from the meninges are less common, and the variety of the tumors is small. Sarcomas are the most frequent and are generally of the small-celled variety. Endothelioma is met with less frequently than sarcoma, but the symptoms produced are quite similar. Starr[8] reports a case of this variety in which McCosh removed the spines and arches of the second, third and fourth lumbar vertebræ. The endothelioma had involved both hard and soft tissues, the spines and arches being eroded. Another case, which compressed the cauda equina, is reported by Troitzky.[9] Among other tumors which may be, though rarely, encountered in the meninges, are fibromas, lipomas and secondary carcinoma.

The greater number of tumors of this region are extradural in origin. Typical symptoms are produced by

1. Deutsche med. Wochenschrift (Berlin and Leipsic), Aug. 14, 1903.
2. Comptes des Séances de la Soc. de Biologie, 1895, p. 622.
3. Thomson, A.: Monograph on "Neuroma and Neurofibromatosis."
4. Ziegler's Beiträge, vol. I.
5. Preg. Vierteljahrsschr. f. d. prakt. Heilkunde, vol. CXXIV.
6. THE JOURNAL A. M. A., Sept. 7, 1901.
7. Jour. of Nervous and Mental Dis., December, 1902.
8. N. Y. Neurological Soc., Dec. 4, 1900.
9. Prager med. Woch., 1893, p. 603.

growth and pressure on the dura and cauda, and in case the tumor is malignant, infiltration of the dura occurs later. The majority of these tumors are sarcomas, either arising in connection with the bony structures or occurring there secondarily. They are generally of the small-celled variety and very malignant. Those arising in the bone may spring from either the periosteum or endosteum. Two cases successfully diagnosticated and removed were reported by Sachs.[10] In the first case there was the history of an old gunshot wound, with muscular atrophy of both limbs. From the symptom group the diagnosis was made of a tumor of the cauda equina. Laminectomy was performed over the third lumbar vertebra by Wyeth, and a tumor was removed from between the second and third lumbar vertebræ. Microscopic examination showed it to be an alveolar sarcoma. Relief from all distressing symptoms followed. In the second case, Gerster removed from between the second and fourth lumbar vertebræ a soft fibrosarcoma, which was compressing the cauda equina. In this case the patient made a good recovery. Fibrovertebral column from the first to the fourth lumbar vertebræ, inclusively, and during the narcosis a fracture of the weakened vertebræ occurred, possibly from an involuntary struggle on the part of the patient. The tumor had completely invaded the bodies of the vertebræ and encroached on the spinal canal, causing external pachymeningitis, which resulted in compression of the roots of the cauda.

Alexander[12] had under his care an unusual case of carcinoma of the cauda equina, occurring in a girl of 18. She was suddenly seized, while at work, with pain in the leg. The pain followed the course of the left great sciatic nerve, and at times reached as far as the ankle. Bowel disturbances were present, and the pain increased daily until the patient died in extreme cachexia. At the autopsy a large tumor, weighing 5 pounds 3 ounces, was found to arise, by a pedicle an inch long and quarter of an inch in diameter, from the lower part of the spinal column. Emerging from the last lumbar vertebra and the sacrum, it extended into the pelvic cavity and also encroached on the spinal canal, com-

No.	Reporter.	Reference.	Tumor.	Height.	Situation.	Result of Operation.
1	F. Volhard . . .	See footnote 1. . .	Glioma	2d lumbar. . . .	In cauda equina .	Not operated on; autopsy.
2	Dejerine and Spiller.	See footnote 2. . .	Sarcoma, small-celled.	3d lumb. and below	In cauda equina .	Died from hemorrhage 3 hours later.
3	Hürthle and Hauwerch.	See footnote 4. . .	Neurofibromat'sis	Lumb. and sacral.	In cauda equina .	Died of cachexia.
4	Köpfelborg. . .	See footnote 3. . .	Neurofibromat'sis	Lumb. and sacral	In cauda equina .	Not operated on; autopsy.
5	Lebensez . . .	See footnote 3. . .	Neurofibromat'sis	Lumb. and sacral	In cauda equina .	Died; not operated on.
6	Nelaton, Hosel.	See footnote 3. . .	Neurofibromat'sis	Lumb. and sacral.	In cauda equina .	Died; not operated on.
7	Boyka	See footnote 5. . .	Neurofibromat'sis	Lumb. and sacral.	In cauda equina .	Died of tuberculosis; not operated on.
8	McCosh	See footnote 6. . .	Sarcoma	12th dors. to 3d L. vert.	In cauda equina .	Recovery and perfect health for more than 1 year.
9	Fraenkel.	See footnote 7. . .	Fibrosarcoma. . .	. . . . .	In cauda equina	Improvement; then death 4 months after operation.
10	S. Sachs.	See footnote 10. .	Sarcoma, alveolar	2d and 3d lumbar.	Intradural and in lamina.	"Excellent recovery, returning to his home in the south, 1 month after operation."
11	M. A. Starr . . .	See footnote 8. . .	Endothelioma . .	2, 3 and 4 lumbar.	Intradural and extradural.	"Pain for 2 days after operation, but since then had improved rapidly and had no pain."
12	Duras	Neur. Centralbl., 1894, p. 281.	Sarcoma	11 dors. to sacrum	Intradural . . .	Patient lived 14 months after operation.
13	P. Bailey	See footnote 8. . .	Sarcoma, round-celled.	12 dors. 1st and 2d lumbar.	Intradural and extradural.	"Has been well all these months; was free from pain and had resumed his occupation."
14	Monroe.	Am. Jr. Med. Sci., Vol. cxvii, 1899, p. 325.	Sarcoma	Lumbar.	. . . . .	Death; not operated.
15	B. Sachs.	See footnote 10. .	Sarcoma; small cell fibrosarcoma	3d to 4th lumbar .	Extradural	Not fully recovered, but marked improvement.
16	A. Clark	See footnote 11. .	Carcinoma	1st dors. to sacrum	Extradural	Not operated on; autopsy.
17	Bechterew. . . .	See footnote 12. .	Carcinoma	1st to 4th lumbar	Extradural	Died.
18	Starr and McCosh.	See footnote 14. .	Lipoma.	Lumbar region. .	Extradural	Improvement, then death in 6 mos. from dorsal caries.
19	Laquer and Rehn	See footnote 15. .	Lymphangioma .	Lumbar region. .	Extradural	Recovery from operation and all symptoms.

mas and chondromas may also have their origin from the bone structure. A case of carcinoma, secondary to carcinoma of the mammary gland, is reported by Clark.[11] The patient, a middle-aged woman, gradually lost the use of her lower extremities and finally suffered complete paraplegia. The autopsy showed the vertebral column softened with carcinomatous infiltration from the first dorsal vertebra to the promontory of the sacrum. The secondary growth beginning in the bone involved the meninges by direct extension. Another instance of secondary carcinoma and a case which produced symptoms typical of a lesion of the cauda equina, is reported by V. Bechterew.[12] The patient suffered first from a tumor of the testicle, which was removed, and following this, he presented the signs of a metastatic growth in the lower part of the abdomen. The desire to have the painful scar in the scrotum excised, induced the surgeon to resort to the apparently simple operation of removal, but the patient awoke from the anesthesia paralyzed in the lower limb. The necropsy, held some time later, showed the tumor had invaded the pressing the meninges and cauda equina. A lipoma of extradural origin is also reported by Starr and McCosh.[14] Among neoplasms less frequently met with are two cases of angioma; one a lymphangioma, the other a cavernous lymphangioma, reported by Laquer[15] and Volhard,[1] respectively. The latter extended from the middle of the sacrum into the spinal canal, compressing both the cauda equina and the dura.[16]

10. N. Y. Med Rec., Jan. 6, 1900.
11. N. Y. Jour. of Med., x, p. 198.
12. Deutsche Zeit. für Nervenheilkunde, xv, 222.

REPORT OF THE WRITER'S CASE.

Family History.—The patient, H. R., is a Russian, 17 years old and a barber by occupation. His father and mother are 43 and 40 years of age, living and well. Two sisters and one brother are in excellent health. There is no history of tuberculosis, nervous diseases or malignant tumors in his family.

Personal History.—When three months old the patient was operated on for tuberculosis of the left hip joint. He had measles at two years of age, since which time he has had no sickness until the onset of the present trouble.

13. Lancet, Lond., 1876, i, 348.
14. Amer. Jour. Med. Sci., June, 1895.
15. Neur. Centralbl., 1891, p. 193.
16. In congenital defects of the bony canal such as rachischisis and meningocele, which are frequent in this region and in destruction of the cord from growths of tertiary syphilis, tuberculosis and in cyst formation, symptoms similar to true neoplasms are produced.

Present Trouble.—This began June, 1902, with burning pain on the outer side of the left leg. The pain was greater at night than in the day time, and in about a month had extended to the left buttock. In January, 1903, pain began in the right leg and extended from the buttock downward to the toes. After having lasted about two or three months it disappeared from the left leg. In March, 1903, the patient entered the Presbyterian Hospital to the service of Dr. Sippy, at which time there was pain in both thighs, more severe than formerly, and extending into the coccyx and the rectum. Urination was frequent, occurring every half hour, preceded by burning pain and at times involuntary. At no time has there been incontinence of the bowels. A tingling sensation was present over the dorsal and plantar surfaces of both feet and outer surface of both legs from the knees to the ankles. At times sharp pains, starting in the sacrum, radiated to the rectum or the outer surface of the thighs, thence to the outer and dorsal surface of the feet and into the little toe. Such pains were experienced on alternate sides; on the left side for a few minutes and then ceasing, appearing after a few moments on the right side. Occasionally he suffered from pain in a reversed direction; beginning in the rectum and radiating to the sacral vertebræ. Since February the movements of the lower limbs have been impaired.

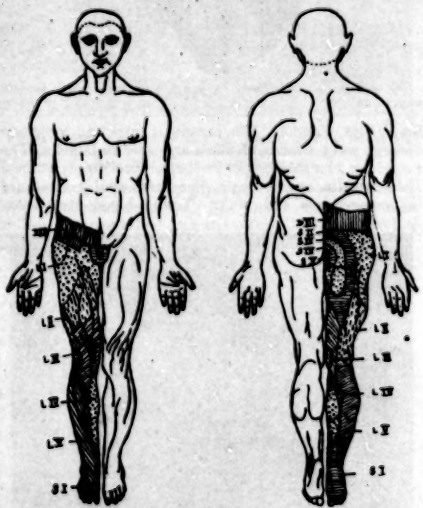

Fig. 1.—Cutaneous distribution of nerves of the lower extremity.

Examination.—Nothing noteworthy is found on examination of the head, chest and abdomen. The lower extremities show motor, reflex and sensory disturbances. The motor involvement is as follows: In the right extremity, the quadriceps femoris is weakened and also flexion of the knee, and dorsal and plantar flexion of the foot. In the left extremity, even greater weakness of dorsal and plantar flexion is found. Examination of the reflexes reveals the following alterations; Abdominal and cremasteric reflexes normal; patellar exaggerated in both legs with a tendency to clonus; Achilles reflex absent, but without clonus. The plantar reflex shows a slight Babinski phenomenon on the right side, whereas it is weaker on the left side. Disturbances of sensation (Fig. 2) noted are: The skin of the penis, anterior and posterior scrotum, lower sacrum, left buttock, upper, inner aspect of the leg and about the anus and the perineum is anesthetic not only for tactile sense, elicited by means of a camel's-hair brush, but also for thermal sense and pain. Relative anesthesia is found in the right buttock and the outer surface of the left leg and absolute anesthesia on the outer surface of the left foot. Relative anesthesia is also present in the dorsum of the left foot and absolute anesthesia in the inner surface of the left foot. A comparison of the areas of cutaneous involvement, as noted in Figure 2 with the cutaneous nerve distribution of the lower extremity, as pictured" in Figure 1, enables us to understand the nerve involvement in this case. The only trophic disturbance is a bed-sore on the left buttock.

It was necessary with these symptoms to make a diagnosis of a lesion either of the conus medullaris or of the cauda equina. The following symptoms are regarded as typical[17] for a lesion of the cauda equina: "The patient first experiences pain on movement of the lower extremities; then the pain becomes spontaneous and persistent with exacerbations. Later, anesthesia begins. In a few cases it has been observed that the function of the central fibers were first disturbed when the process was such that a uniform compression of the cauda was produced. Symptoms of disturbance of the functions of the bladder and rectum may appear early and are usually present before anesthesia becomes permanent. Muscular weakness is present in proportion to the pressure on the motor fibers and, as a rule, does not appear until pain has become pronounced. The paralysis is characterized by loss of muscular tone. An early examination may show exaggerated reflexes; later they are diminished and finally lost. Atrophies of the muscles develop and the electrical reactions may be altered; decubitus has been noticed." The involvement of one extremity more than the other, as in Fränkel's case; the slow development of motor paralysis, of sensory disturbances and of other symptoms and the destruction of reflexes before loss of power are other important symptoms.

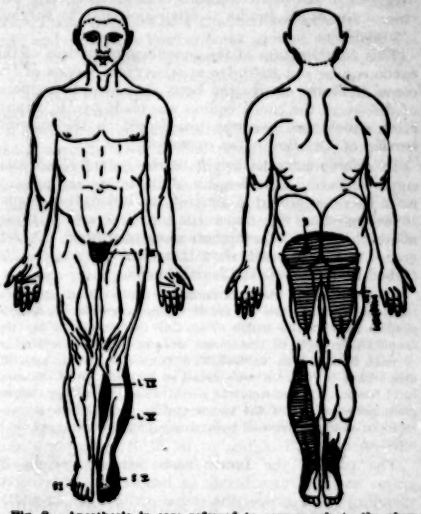

Fig. 2.—Anesthesia in case referred to corresponds to the above areas. The spot marked B represents a bedsore.

In regard to the differential diagnosis between such cases and diseases of the conus medullaris, it has been

17. Sippy, B. W.: THE JOURNAL A. M. A., 1900, xxxviii, 1196.

noted that in lesions of the latter, the "symptoms develop more rapidly; the various sensory disturbances may not be alike; pain and temperature sensations are more frequently seriously affected than tactile sense. Severe pain is absent, provided the conus lesion does not involve the cauda fibers. Disease of the conus is more likely to cause decubitus than caudal disease. The most important symptom of caudal disease is pain. A conus lesion may be associated with pain, provided the cauda meninges are also involved. The absence of pain is indicative of conus lesion."

V. Bechterew[18] makes the point that the principal differentiating feature between lesions of the cauda and of the conus medullaris consists in the fact that conus lesions cause an anesthesia limited to the anoperineal region, and that the sciatic field, so commonly affected in cauda lesions, does not participate. The differential diagnosis of the two conditions is important, since disease of the cauda equina is often amenable to surgical treatment.

This consideration of the symptoms of disease of the cauda equina and its differentiation from lesions of the conus indicates clearly the basis on which a diagnosis of disease of the cauda equina was made by Dr. Sippy, after which the case was transferred to the surgical service of Dr. Bevan for operation.

In reference to the height of the lesion, if no local signs indicating involvement of the spine are present, as in this case, to aid in locating the lesion, it is proper to assume that the upper limit of the lesion is just above the exit of the highest nerve disturbed. A reference to Figure 2 will show that the highest nerve disturbed in this case is the fourth lumbar.

Operation.—July 16, an incision was made extending several inches above and below the fourth lumbar vertebra. A spindle-shaped mass, three inches long and two inches wide, was found to the right of the spines, situated outside the laminæ. A part of this was excised, two laminæ removed, and the membranes of the cord were found to be made up of the same solid tissue. The incision was closed without drainage. Cover glass preparations of the tumor stained for bacteria, as well as inoculation of tubes of blood serum and glycerin agar, were negative.

The part of the tumor mass removed weighs 30 grams and measures 6 cm. in length, this axis corresponding to the axis of the spinal cord; 4 cm. in width, this corresponding to the lateral diameter of the body, and 2.5 cm. in depth, this corresponding to the anteroposterior diameter of the body. The shape is irregularly triangular, the base and apex of which are formed, respectively, by the upper and lower poles of the tumor. The color, a whitish gray as a whole, is modified somewhat in two areas, one (Fig. 3, b) on the posterior and left lateral aspect, where a dark-red color marks a portion incorporating the deep muscle fibers of the back. The second variation is noted at the base of the triangle on the right side, where a nodule (Fig. 3, a) 1.5 cm. in diameter presents a creamy white appearance. The relation of the removed mass to the neighboring structures is as follows: The anterior surface was in direct contact with the laminæ of the vertebral column; the posterior surface incorporated in the deep musculature and fascia of the back; the lateral parts of the removed piece were in contact with the rest of the tumor mass, which was not removed. The consistency of the tumor removed is firm, rebounding when dropped on the table. On cut section the knife meets with firm resistance, and the same general color noted above persists, but in addition are many small yellow areas, varying in size from a pin head to a small bean. The largest of these yellow areas is seen in the nodule described above.

Many sections were taken from different parts of the tumor, and the predominating arrangement is as follows (Figs. 4 and 5): The capsule is thick and composed of large wavy strands of fibers arranged in lamellæ. The nuclei are elongated, spindle-shaped and deeply stained (hematoxylin and eosin). The intercellular substance is homogeneous and pink. Young blood vessels are present in great numbers and many contain red-blood corpuscles. Blood spaces without walls occur between the lamellæ, the red-blood corpuscles coming in direct contact with the fibers of the capsule. Clumps of small,

Fig. 3.—The mass removed. a and b, sites from which sections were made.

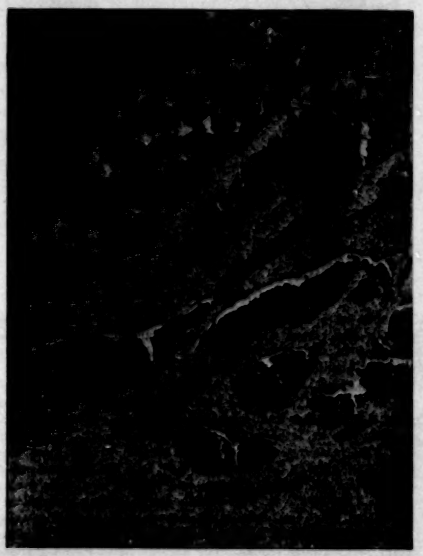

Fig. 4.—Section taken from part of tumor, indicated by arrow b in Figure 3. (Low power photomicrograph.)

18. Rev. de Psych. et de Neurol., No. 9, 1899.

round cells are scattered diffusely throughout the capsule. Extending from the capsule are trabeculæ, projecting into the substance of the tissue, dividing the parenchyma into innumerable alveolar areas. The structure of these trabeculæ resembles that of the capsule, except that the smaller divisions show degenerative

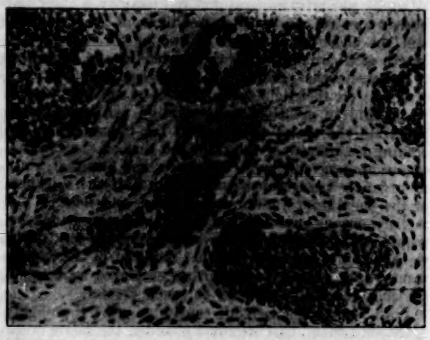

Fig. 5.—(High power drawing.) A, Tumor cells; B, blood vessel containing tumor cells; C, extravasation of blood into stroma; D, stroma; E, young blood vessel among tumor cells.

changes, due probably to pressure caused by growth of the parenchymatous tissue. The nuclei in the trabeculæ are less deeply stained and the intercellular tissue of a lighter pink color. The blood vessels in these trabeculæ

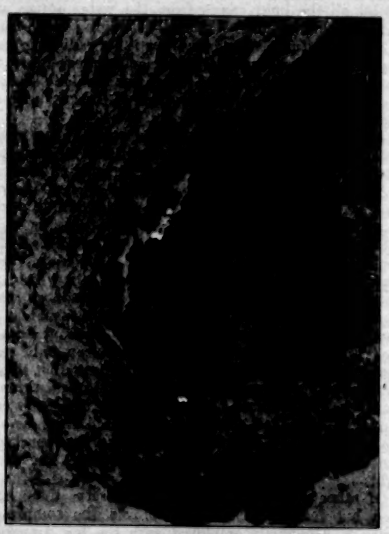

Fig. 6.—Meningeal involvement—dura invaded by tumor cells. (Photomicrograph.)

are interesting. Some of the vessel walls are composed of a single layer of endothelial cells, which are in direct contact with the fibrous structure of the trabeculæ; these vessels are large and contain red corpuscles. Other vessels are present which have exceedingly thick walls, very narrow channels, and contain but few corpuscles. In many of the blood vessels are large heavily stained cells, similar to those found in the acini of the tumor, and which are to be described later.

The parenchyma is arranged in round, oval or irregular-shaped areas, ranging in size from small microscopic divisions, to the size of a pea. These dark-staining masses with thickly beset cells, present a marked contrast with the paler enveloping trabeculæ. The cells are large, round or epithelioid in shape and closely arranged. Their protoplasm in general is translucent, containing many irregularly arranged chromatic granules. Young blood vessels containing red-blood corpuscles are seen in the parenchyma; the walls of these are made up of tumor cells. Areas of degeneration, varying in size from small microscopic areas to .5 cm., are noted in many of the alveoli, especially the larger ones. These areas are of a hyaline-like character, stain pink, and present a homogeneous ground substance in which are imbedded transparent degenerated cells. They correspond to the areas described in the gross section as yellow-colored spots. The faint reticulum contains much blood.

A portion of the dura excised from where the membranes were involved in the tumor, showed, on microscopic examination, invasion by the same tumor cells described in the foregoing (Fig. 6).

The age of the patient, the rapid growth of the neoplasm, its histologic structure and the progressive course of the disease since the operation, are all in conformity with the diagnosis of sarcoma.

Results.—Three months after the operation the patient was found greatly debilitated, and presented an exaggeration of previous symptoms. Control of the bladder was entirely lost and involuntary bowel movements frequent, especially when the patient was asleep. He was unable to walk or even to support himself on his lower extremities. The pains in the limbs and back continued as before the operation, and emaciation was marked.

I am indebted to Dr. E. R. LeCount for valuable suggestions and criticisms during the preparation of this work, and to Drs. B. W. Sippy and A. D. Bevan for the clinical record of the case reported.[19]

RECENT ADVANCES IN ACTINOTHERAPY.

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Young as is the treatment of disease by the various forms of radiant energy, there is already confusion in its terminology, and it will not be out of place to begin this review with the statement that the term "actinotherapy" is now the accepted designation for the method that employs the violet and ultraviolet spectral rays. The *x*-ray treatment is known as "radiotherapy," while "phototherapy" is employed for all kinds of light treatment collectively. There is need for insistence on exactitude in the employment of these terms, and even some of those who especially occupy themselves with phototherapeutics are open to criticism in this regard. Thus Freund entitles the authoritative work that he has just published "*Grundriss der Gesammten Radiotherapie*," including therein not only the Röntgen treatment, but also

19. I would mention, in addition to the authorities already cited, the following: Thorburn, W.: Med. Chronicle, 1889, x, 177-180; Fisher, W. W.: Tr. Prov. M. and S. Assn., Lond., 1841, 2, x, 203; Oliver, J.: Brain, Lond., 1886-7, ix, 550-552.

that by high-frequency currents, Becquerel rays, visible and ultraviolet light rays, and even heat rays. The latter two agents he groups under the subheading of phototherapy. If the masters are not clear in their terminology the pupils will certainly go astray.

The scope of this retrospect is therefore restricted to the consideration of the progress that has recently been made in the therapeutic use of the ether vibrations that are appreciable to the unaided eye, together with the ultraviolet and chemically demonstrable ones that lie just beyond them. It practically includes only treatment with concentrated sunlight and with the various forms of the electric arc. It does not include treatment with the ordinary incandescent bulbs; and as there is a very prevalent misconception on that subject, it may not be out of place to refer to it here. The sun and the voltaic arc are the only efficient sources of actinotherapeutic energy that we possess. The incandescent bulb light has extremely little actinic power and penetration; nor can any practicable increase in its candle power or number give us a light that is comparable with even a very small arc in these qualities. The so-called light baths that are equipped with incandescents are practically sweat baths, and nothing more. The assertion that any actinic effect is gotten from them is entirely unsubstantiated, and I shall not consider them in this review.

A number of forms of apparatus, announced as improvements on the original Finsen type, have been introduced during the last year or two. Their aim throughout has been the very desirable one of simplifying and cheapening the apparatus, for it can not be denied that the Danish machine is complicated and troublesome to run, as well as expensive to install and use. I have had an opportunity to see and examine a number of the newer models, including the dermo-lamp, the Lortet-Genoud and the London lamp, and with the others I am familiar from the drawings and descriptions. They all run on small amperages and can be used on the ordinary incandescent wiring, and insofar possess very apparent practical advantages. They all give a superficial reaction; but they can not be expected to have any penetrative power. No attempt has been made to prove that their feeble light penetrates even the epidermis. In experiments recorded last year,[1] I proved that light of sufficient intensity from an arc could be made to penetrate not only the skin, but all the internal organs, and even the skin of the back after traversing the entire thickness of the body and then to influence a photographic plate. I used, however, a 50-ampere arc, giving a 20,000 to 30,000 candlepower light. Power is required for penetration; and without penetration, we can not expect to affect even the deeper layers of the skin, much less the internal organs.

This is a legitimate criticism of the new machines running on from 2 to 10 amperes of current. We can not hope to treat the deeper dermatoses with them, and it is entirely useless to attempt to affect a tubercular or carcinomatous focus in one of the internal organs. It is precisely in these fields that the future of the method lies. The few superficial dermatoses that are amenable to the action of the low-power instruments can well be treated by other means. In the latest publication from his institute,[2] Finsen is especially emphatic on this point. Leredde[3] agrees with him, and says justly that the intensity of surface reaction is no measure of the deep effect. The Lortet-Genoud apparatus gives a bulla in twenty minutes, but the light does not penetrate the tissues. It takes fifteen minutes for it to penetrate a rabbit's ear and affect a sensitive plate. Thinner living animal tissue than that it would be hard to find. With the powerful apparatus that I employ, a muscular human forearm can be penetrated in about the same time, and the chest or abdomen in two or three times the length of time required by the Lortet-Genoud apparatus to penetrate the rabbit's ear. The conclusions that I came to were that light from a source of sufficient actinic power and in sufficient concentration can be made to penetrate the entire thickness of the human body, including both layers of the skin, and that all the internal organs are accessible to its influence; and also that, since no organ or tissue can be more than half the thickness of the body from a cutaneous surface, and most of the internal organs are much less than that distance, the time required for efficient actinic penetration to any depth would be only a fraction of that required in the experiments; and conversely, if the time employed were equal, the chemotaxic effect would be much greater.

Both Finsen and Leredde conclude, and I thoroughly agree with them, that we must abandon the newer weak forms of apparatus, and return to those that concentrate large amounts of light. Of these only two are available. The original Copenhagen model is now purchasable in Europe, but it is hardly suited for any but institution use. It is extremely bulky, must be suspended from the ceiling, and requires an entire room. It is true that four patients can be treated at once; but as almost all the light comes from the crater of the arc, and since that crater is continually changing its position, it is evident that each of the four tubes radiating from the light will receive on the average only one-fourth of the light. This is the chief reason for the daily sessions of an hour or more for long periods of time that are required at the institute.

The instrument that I employ, while by no means small, is movable on castors and is suitable for the office. The full actinic force of the arc is directed on the area to be treated, and the only limit to the concentration of the circle of light is the efficiency of the cooling device in cutting out the heat rays.

Some legitimate objections to the earlier forms of the apparatus have lately been removed. The use of ordinary glass in the condensers and waterbath, which impedes the passage of the ultraviolet rays, has been abandoned; a Jena glass that is almost as transparent as rock crystal to them is now employed. Such, at least, is the assertion of the manufacturers. I can only state from careful comparative spectroscopic tests that it permits very much more of the ultraviolet to pass through than does the ordinary material. I also use a new carbon containing a large amount of iron and manganese in the place of the ordinary electrode. It gives a markedly violet flame that is entirely different from the usual light.

Of other improvements in the apparatus there have been but few. Broca[4] has improved the compressor which is necessarily employed with the low amperage lamps to get any penetration at all. I have not found it necessary to use anything of the kind. De Beurmann[5] applies a 1/1000 adrenalin solution to the part to expel the blood. He claims that it can be kept anemic for an

1. Medical Record, April 18, 1902.
2. Mittheilungen aus Finsen's Med. Lysinstitut, III, 1903.
3. Annales de Derm. et de Syph., December, 1902.
4. Annales de Derm. et de Syph., April, 1902.
5. Ibid., July, 1902.

hour in this way. Piffard[6] has lately demonstrated an improvement on this method, using cataphoresis to drive the adrenalin into the tissues. The iron electrodes that Bang announced last year have appeared. They seem to work well for short periods of time with the smaller machines.

In the present state of our knowledge of the subject, I am prepared to say that it is quite useless to attempt actinotherapeutic work with anything less than 20 amperes and 55 volts; and that double that force is desirable if the internal organs are to be treated.

Some attention has recently been paid to the employment of sunlight in the place of the arc. Its applicability is limited, of course, since it can only be used during certain hours on bright days; but the absence of cost and the simplicity of the apparatus required are in its favor and I think will be extensively employed. The conditions are somewhat different from those with the arc. In the latter case we are dealing with rays diverging from a point, and it is desirable to approach the collecting lens as closely as possible to the source of light; and expense limits the size of the lenses in the machine. In sunlight we have practically parallel rays, and the amount of light collected is limited only by the size of the lens. Some ultraviolet light passes through all glass, and it is therefore possible to make the sunlight collecting lens of ordinary glass so large as to compensate for its deficient permeability, and make it equal in actinic power to a smaller rock crystal or glass lens. These considerations have led Finsen to employ ordinary glass and not rock crystal in his sunlight apparatus. The arc contains more violet and ultraviolet rays than does sunlight, on account of the atmospheric absorption; and the electric light can be used on any day and at any time of the day or night.

It would lead me too far to go into the consideration of all the various methods and apparatuses now employed, and I shall, therefore, proceed at once to a very brief consideration of the theory of actinotherapeutic action. The spectral rays that we employ are certainly bactericide. Velyaminoff[7] has experimented very extensively with the most varied pathogenic and non-pathogenic organisms, and states that the micro-organisms are directly and rapidly destroyed by the light; and Nagelschmidt[8] agrees with him. Sack,[9] on the other hand, is more inclined to attribute the results obtained to the photochemical and inflammatory effect. There is also an undoubted effect on the vasomotor nerves. Capillary dilatation, as Bie[10] has shown, is an invariable effect; and this is not a temporary matter, but persists for a long time, even for months, after the other effects of actinic action have passed. In fact, the latest investigations would tend to show that the rays cause a distinct endovasculitis after a time, and that, while slight action may cause vascular dilatation, the ultimate result is an inflammation of low grade with consequent permanent atrophy of the vascular tissues. We must conclude that the action of the light rays is a complicated one. It is, in part, directly bactericide and in part photochemical on the vasomotor nerves and the vascular structures. In addition to these, there are remoter effects in the stimulation of the tissue oxidation processes and new connective tissue formation.

6. Medical Record, March 7, 1903.
7. THE JOURNAL A. M. A., April 12, 1902.
8. Archiv für Derm. und Syph., Nos. 2 and 3, 1903.
9. Dermatologisches Centralblatt, September, 1902.
10. Verhand. des Vereins f. innere Med., Wiesbaden, April 15-18, 1903.

In one respect the light action differs markedly from that of the *x*-ray, and that is a very important one from a practical point of view. The reactive tissue changes that it occasions are always moderate and controllable, and they appear promptly. There is never any delayed, excessive or uncontrollable effect. The condition of the hands of many of the Röntgen operators, and their insistance on their patients signing a release before beginning treatment, is sufficient evidence of the reality of the danger. A very considerable experience, now extending over several years, leads me to be positive on this point, and this with the most powerful currents available. The reaction can be pushed to vesiculation in a single session, if desired, and redness and swelling always occur. But all these phenomena disappear in a few hours or a day or two, and require, at the utmost, the application of a dusting powder. There are never any remote effects. Actinotherapy is perfectly safe.

Turning now to that portion of the subject that interests us most—the results obtained from the method—we are confronted with the facts that it has so far been employed by dermatologists almost exclusively, and that many of these used only the smaller and inefficient apparatuses to which attention has already been drawn. The report material is large, but not all of it is valuable. In lupus vulgaris, tuberculosis verrucosa cutis, tubercular ulcer, postmortem tubercle, etc., it is firmly established, not only as the most eligible, effective and innocuous treatment, but even as a test. Lesions that do not react and improve under it are not tubercular. Finsen's cases now number about 1,000, and almost all of them have been cured. His conclusions have been confirmed by many recent investigators, of whom I shall mention only a few. Klabowsky[11] reports 37 cases, including many old and intractable ones, that all did well. Gaston, Baudouin and Chatin[4] report 78 cases, one-third of them being completely and permanently cured; most of the others came irregularly or disappeared. There are similar experiences from a long list of investigators, among whom I shall merely mention Petersen,[12] von Ziemssen,[13] Velyaminoff,[14] Schmidt,[15] Sack,[16] Danlos,[17] Jessner,[18] and Hopkins.[19]

I have treated a number of cases myself with most excellent results, but I have not as yet published anything about them. I have had sufficient personal experience, however, to entirely confirm the conclusions of the European investigators. The affections are cured with the smallest possible amount of tissue absorption; the cicatrix is often hardly apparent. This is a point of extreme importance, since the face is the part most often affected.

Lupus erythematosus is a new field for the actinotherapeutic method. An article will shortly appear embodying my own results. Out of four private cases I have had three cures, and the fourth one was very extensive and of many years' standing. The patient lived in a foreign country, and was only under treatment for a short time. Ravogli[19] has treated a case of nine years' standing, in which the nose and both cheeks were involved. Finsen's latest report includes 31 cases, with 11 complete recoveries; and 19 cases were still under treat-

11. Wratch: Dermatologisches Centralblatt, July, 1902.
12. Wratch: Monatshefte f. prak. Derm., April 15, 1902.
13. Monatshefte für prak. Derm., June 15, 1902.
14. Rosssky Wratch: THE JOURNAL A. M. A., April 12, 1902.
15. Archiv für Derm. und Syph., March, 1902.
16. Münchener med. Woch., Nos. 13 and 14, 1902.
17. Annales de Derm. et de Syph., June, 1902.
18. THE JOURNAL A. M. A.; Sept. 13, 1902.
19. Cincinnati Lancet-Clinic, Nov. 9, 1901.

ment at the time the account was written. Leredde and Pautrier had 23 cases; 3 were complete failures; 3 were improved; 6 had "segmentary cures" of the patches treated, and 11 were entirely cured. These authors have added some interesting details concerning their cases, which are worthy of note as emphasizing the intractability of the disease and enabling us to estimate the value of their results. They had had altogether not less than 802 galvanocaustic séances, 382 scarifications, 462 high-frequency current sessions, without the cure of a single patch. Many of the authors previously mentioned record good results in the disease; a recapitulation is unnecessary. My own opinion is that at least one-third and possibly one-half the cases of this obstinate affection are curable by actinotherapy.

I have treated several cases of alopecia areata, and have on the whole been satisfied with the results. I believe, however, that it is very evident that under that designation are included at least two distinct affections, one of which is circumscribed, limited to the scalp chiefly, and benign in that it tends ultimately to spontaneous recovery, while the other is progressive, affects the entire body, and is malignant in the sense that treatment seems to have but little effect on its course. All my cases were of the former variety, but I can testify to a surprisingly rapid return of the hair in the patches treated. In some cases there was a good growth of lanugo hair after half a dozen sessions. Whether these cases are parasitic or not, our knowledge of the effects of light on the tissues would lead us to expect results; and I regard these cases as especially suited for this method of treatment. A number of other investigators give favorable reports, among whom Sack,[20] Schmidt,[17] Hyde and Montgomery,[21] and Leredde[4] may be mentioned.

Actinotherapy has been lately employed in the various forms of birthmark, nevus telangiectasis, etc. We are practically helpless in these cases when they are at all extensive; and, as the face is often affected, any method that promises relief is welcome. The endovasculitis excited by the light finally leads to cicatricial contraction and obliteration of the redundant vessels. A number of the writers above mentioned report successful cases, but I have not yet had occasion to try it in a suitable one. The difficulty has been that all my cases have been infants or very young children, whom it has been impossible to keep quiet while the light has been applied. I have tried in two cases to put the child to sleep with the aid of the breast or the nursing bottle; but this is an expedient that can not be employed with the regularity and for the length of time that is required. I have, therefore, been compelled to advise the postponement of treatment until the children are older. There then would be no difficulty in applying it, and I should certainly recommend its trial in adults, more especially in extensive cases of port-wine mark and non-hypertrophic telangiectasis.

A year ago Leredde, Bie, Blacker and Sequiera, Sjögren, Helm, and others reported cures of various cases of carcinoma of the skin, epithelioma, rodent ulcer, and Paget's disease with the light. That the more recent literature of the subject is small is probably due to the fact that radiotherapy has been so extensively employed in this class of cases, and that many experimenters have been using the smaller low-amperage apparatuses, to the inefficiency of which I have already called attention. Leredde[4] and Velyaminoff[16] have employed the more powerful machines with results at least as good as those obtained from the *x*-ray. I have no results to report as yet. My cases have been either extensive ones in hospital practice, in which, for reasons already stated, the treatment could not be employed, or private ones in which the circumstances precluded the use of a method that takes time. Further and extensive experimentation is required. The treatment is rational, in view of what we know of the action of the light, but actual trial only can decide as to its efficacy.

I have had one case of sarcoma cutis under the treatment for some time. It is quite extensive, however, and only a small portion of the growth can be treated at a time. The results have been fairly good. Individual nodules and tumors show distinct retrogressive changes under the influence of the light. The method is only applicable, of course, to the cases showing a single or only a few tumors. The disseminated cases, in which large areas or the entire cutaneous surface is affected, can not be treated in this way.

Rosacea, especially when the stage of permanent vascularization has been reached, would seem to be a good field for the employment of actinotherapy for the same reasons as in nevus. Finsen reports 15 of these cases, with 4 cures, 5 marked improvements, 1 still under treatment, and the remaining 5 as having stopped treatment after a short time. Bang,[22] and a number of others, report good results. I have used it in a number of cases of acne rosacea, but found it too slow to employ alone. It was generally employed in connection with curetting and local applications. I shall endeavor to use it exclusively in the next bad case of acne pustulosa that I meet.

In the parasitic skin diseases, ringworm, favus, sycosis and pityriasis versicolor, Von Ziemssen[23] and Leredde[24] have done well with the method. The same authorities report good results in psoriasis and rhinophyma. I have not been able to do anything with it in psoriasis; and we possess other simple and effective means of treating the disease. A number of investigators have used the method in various eczematous affections, in burns and wounds, in tropical ulcer, etc., but neither their number nor their results warrant their inclusion in this report.

As regards the employment of actinotherapy for the internal organs, the only reports as yet are those of Freudenthal[25] and Williams.[26] The former has found that the light is a most important factor in combating the symptoms of hay fever, and a valuable adjuvant in the treatment of pulmonary tuberculosis. The author takes a very conservative position in the matter, as is entirely proper in view of the very limited amount of work that has as yet been done in this field.

I can only say that the method is a promising field for investigation. The bactericide and tissue stimulating action of light is proven, as is also the fact that it can be made to penetrate the body and reach the internal organs. Whether its properties can be successfully employed for the treatment of diseases of the internal organs must be left for future investigation to decide.

20. Münchener Med. Woch.: Monatshefte f. prakt. Derm., Oct. 1, 1902.
21. THE JOURNAL A. M. A., Jan. 3, 1902.
22. Berliner klin. Woch.: Monatshefte f. prakt. Derm., April 15, 1902.
23. Ibid., June 15, 1902.
24. Presse Médicale: Ibid., Sept. 15, 1902.
25. New York Medical Journal, July 12, 1902.
26. Dietetic and Hygienic Gazette, October, 1902.

EXAMINATION OF THE BLOOD OF PNEUMONIA PATIENTS FOR PNEUMOCOCCI.*

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INTRODUCTION.

The considerations which led to the present investigation are briefly as follows: In looking over the work thus far accomplished with regard to the presence of the pneumococcus in the blood of pneumonia patients, one is struck by the contradictory results of the various investigators. When Prochaska[25] [22] finds the organism each time in a large number of cases, irrespective of the outcome of the disease, while men like Kühnau,[16] in Germany, and James and Tuttle,[15] in this country, find it rarely and only in fatal cases, the need of more research work on the subject is clearly to be seen. A second reason for this work which needs no emphasis is its value from a diagnostic point of view. If the pneumococcus can be recovered from the blood of pneumonias, as can the plasmodium of Laveran in malaria, diagnosis, prognosis and treatment are all affected.

The immediate objects of the present work were four; to determine:

1. Are pneumococci to be found in the blood at any time?
2. With what frequency may they be found in all cases?
3. What is the simplest method of finding them?
4. What is the prognostic value of positive results if such occur?

METHODS OF EXPERIMENTATION.

Instruments.—The instruments used for drawing blood in work of this description vary from the uncleanly wet cup of Petruschky[9] to the lancet of Schabad[10] and Kühnau.[16] Sittman[9] used a glass canula, which instrument was also employed by Prochaska.[25] White[21] used a syringe. In the present work a glass canula was employed, marked in cubic centimeters to register the amount of blood taken. One end was drawn to a tube which was ground to fit a platinum needle about six cm. long; the other end to accommodate a rubber bulb supplying sufficient suction to draw up the blood to any height desired. This instrument, purchased of Leitz, was found very satisfactory.

Media.—In the first few experiments litmus milk and blood serum were employed, as well as bouillon. Cole[21] of Johns Hopkins used sterile litmus milk and considered it superior to bouillon on account of the early acidification of the medium. Blood serum was also used by a few investigators; but the majority of workers employed bouillon, and hence this medium would be chosen for purposes of comparison and uniformity, if for no other reason. The ease with which it is prepared is another argument in its favor, and any lingering doubts as to its superiority would be dissipated by the warm recommendation of A. Fraenkel. For the above reasons, after the first few experiments, bouillon was used throughout the work. The bouillon was autoclaved at 110 C., and one of the flasks tested afterward for alkalinity, etc.

Technic.—Any attempt to cultivate bacteria from the blood is worse than useless unless done under the strictest aseptic precautions. The above observation may perhaps seem unnecessary in this connection, yet in reading over some of the work referred to above, one may well doubt its aseptic character on account of the technic employed. In many cases blood was taken from the finger—a point of technic which renders these results open to suspicion, to say the least. Kühnau[16] established this point experimentally in 18 persons by taking blood from the arm and finger of each case. Of the 18 fingers there were 12 contaminations, while not one occurred from the arm, making a convincing argument against the finger as a location for drawing blood.

The technic of the present work was as follows: The operator's hands were prepared by scrubbing for ten minutes with green soap and sterile water. They were then soaked in bichlorid, washed with alcohol, and finally with ether. In the meantime, an assistant scrubbed the field at the bend of the elbow, and put on a pad soaked with bichlorid. Then he exerted sufficient pressure on the upper arm to make the veins below stand out prominently. The operator then completed the preparation of the patient's arm by a rub with alcohol and afterward with ether. The sterilized instrument was then introduced into the most prominent vein in the sterile field. This was usually the median basilic or median cephalic, though the superficial median and radial veins were occasionally chosen on account of their prominence. The needle was introduced into the vein perpendicular to its surface with one firm push, causing a pain so inconsiderable as to require no local anesthetic. As soon as the vein was entered the blood appeared in the glass canula, being drawn up by the suction of the bulb. When a sufficient amount was obtained it was put into the flask of bouillon, gently agitated to mix the culture and allowed to grow in the incubator at 37 C.

REPORT OF BLOOD EXAMINATIONS.

The series below is made up of 50 cases, divided into two groups of 25 cases each. The basis of this division is simply a difference in the proportion of blood to bouillon.

GROUP 1.—In the first 25 cases, from 8 to 9 c.c. of blood were used to 50 c.c. of bouillon, making a dilution of about 1 to 6. Of these 25 cases, only 3 showed the pneumococcus, while the other 22 were negative.

The three positive cases were as follows:

CASE 1.—A Greek at Wesley Hospital, aged 34. History of cold, followed by a chill, fever, and, subsequently, severe pain under the right nipple. Examination on admission showed dullness over entire right chest and moist rales. Abundant rusty sputum which contained pneumococci. Blood examination was made two days after admission, at which time the temperature was 102.6 F. (39.2 C.), pulse 80 and respiration 26. The blood was grown on bouillon in the incubator at 37 C. for two days when a brick-dust precipitate appeared at the bottom of the flask. Microscopic examination showed a small round or oval coccus with lance-shaped extremity occurring in pairs or singly, less often in small groups. Streaks on agar yielded the typical transparent, dewy growths of the pneumococcus, which stains showed in pure culture. On the afternoon of the day on which the blood was taken, the patient's temperature fell to normal. The patient was discharged cured one week later. In this case the pneumococci were found in the blood just before the crisis.

CASE 2.—H. S., male, aged 18 years, entered Wesley Hospital with dullness on right side, pain, etc., and was diagnosed as pneumonia. The blood examination was made at 2 p. m. the following day with a temperature of 102.6 F. (39.2 C.), pulse 92 and respiration 24. Growth on bouillon and subcultures on agar showed pure colonies of the pneumococcus. Patient recovered.

CASE 3.—Mrs. M., aged 52 years, admitted to hospital with a temperature of 106 F. (41 C.), pulse 152 and respiration

* Work done at Professor Zeit's laboratory, Northwestern University, Chicago.

48. Dullness at first in the left lower lobe, which almost cleared up, when the left upper lobe became involved and friction sounds appeared. There was a constant delirium and a persistently high temperature of from 103 to 106.6 F. (38.5 to 41.5 C.). The blood examination was made with a temperature of 103 F., pulse 152, and respiration 36. On the third day the bouillon culture showed the pneumococcus in abundance. Confirmed by cultural controls. Two days later the patient died from heart failure with a temperature of 108 F.

Owing to lack of space, the negative cases will be omitted. The positive results constituted about 12 per cent. of this group of 25 cases. One of the positive cases died and 2 recovered. Of the negative cases, 11 died and 11 recovered.

GROUP 2.—Although the results obtained in this series of cases were found to agree with those of many investigators in the same field, still the question arose as to whether the proportion of blood to bouillon might not be so high as to inhibit the growth of the organism except in favorable cases. It is not necessary here to enter into a discussion of Ehrlich's side-chain theory, nor the action of the side-chains on the pneumococcus. But with this question in view it was suggested by Dr. of these structures, which disappeared entirely in the later generations.

CASE 3.—William E., printer, aged 27, admitted to hospita with a temperature of 97, pulse 120 and respiration 30. Th same evening his temperature rose to 102, pulse 120, respiration 30. The night before admission patient had a severe chill, followed by fever and cough, with pain in the right axilla. Rusty sputum. History of pneumonia one year before. Physical findings of lobar pneumonia. Examined, with temperature of 105, pulse 116, respiration 30. The patient recovered. Examination of bouillon cultures and agar streaks showed no pneumococci.

CASE 4.—Mrs. L., aged 33, admitted to hospital with a temperature of 103.2, pulse 112 and respiration 32. History of chill with temperature. Physical examination showed consolidation of the right upper lobe, extending to the middle lobe. Blood was taken with temperature of 102.5, pulse 120 and respiration 30. Examination of the bouillon cultures showed many pneumococci, some encapsulated and others not. The organism was mostly in diplococcus arrangement with a few chains of four and five. In the agar were many nests of pneumococci with fewer capsules, while in the later generations no capsules appeared. The patient died following examination.

CASE 5.—Oresti P., Italian, aged 18. Entered the hospital unconscious and vomited all night. Red blood count showed

SUMMARY OF GROUP 2 (25 CASES).

No.	Name, Age and Sex.	Hospital.	Clinical Condition.	Death or Recovery.	Result.	Remarks.
1	A. A., 24, Male.	Cook County	Temp. 99.6, pulse 108, resp. 30	Died.	Negative	Blood taken during pseudo-crisis.
2	E. M. M., 24, Male.	Cook County	Temp. 1 2, pulse 98, resp 22	Recovered.	Positive	Many pneumococci.
3	W. J., 21, Male	Cook County	Temp. 105, pulse 116, resp. 30	Recovered.	Negative	
4	M. J., 28, Female	Lharity	Temp. 102.5, pulse 120, resp. 30	Died.	Positive	Died following day.
5	O. F., 18, Male	Wesley	Temp. 101.9, pulse 88, resp. 28	Recovered.	Positive	General infection.
6	D. P., 45, Male.	Cook County	Temp. 103, ax., pulse 120, resp. 48	Died.	Positive	Died following day.
7	J. C., 48, Male.	Cook County	Temp. 105, pulse 120, resp. 38	Died.	Positive	
8	W. H., 42, Male.	Cook County	Temp. 102, pulse 124, resp. 40	Died.	Positive	
9	J. D., 52, Male.	Cook County	Temp. 97.2, pulse 84, resp. 24	Recovered.	Positive	Senile form.
10	H., 45, Male	Wesley	Temp. 101, pulse 84, resp. 28	Recovered.	Positive	Scanty growth.
11	E. I., 22, Male	Wesley	Temp. 103, pulse 90, resp. 28	Recovered.	Positive	Pneumococcic otitis media.
12	H. J., 25, Female	Wesley	Temp. 102.4, pulse 107, resp. 26	Recovered.	Positive	General infection.
13	H. P., 30, Male	Cook County	Temp. 103.2, pulse 130, resp. 30	Recovered.	Negative	Took oxygen during examination.
14	J. C., 24, Male.	Wesley	Temp. 102 4, pulse 110, resp. 28	Recovered.	Positive	
15	N. C., 22, Female	Wesley	Temp. 102, pulse 128, resp. 34	Recovered.	Positive	First examination was negative, second positive.
16	G. A., 40, Male	Wesley	Temp. 103, pulse 90 resp. 28	Recovered.	Positive	
17	P. H., 50, Male	Cook County	Temp. 100.6, p lse 104, resp. 32	Recovered.	Negative	
18	G. W., 22, Male.	Cook County	Temp. 101.2, pulse 92, resp. 26	Recovered.	Positive	
19	P. eV., 35, Male.	Cook County	Temp. 100.6, pulse 104, resp. 32	Recovered.	Positive	Scanty growth.
20	W. H., 34, Male.	Cook County	Temp. 103, pulse 128, resp. 48	Died.	Positive	Alcoholic.
21	H. E., 43, Male	Wesley	Temp. 101, pulse 98, resp. 30	Recovered.	Positive	
22	P. D., 40, Male.	Mercy	Temp. 97.4, pulse 72, resp. 30	Recovered.	Positive	Following the crisis.
23	H. C., 47 Male.	Cook County	Temp 99.8, pulse 112, resp. 36	Recovered.	Negative	Crisis previous day.
24	J. K., 27, Male.	Cook County	Temp. 102.2, pulse 128, resp. 48	Died.	Negative	Alcoholic.
25	J. E., 47, Male.	Cook County	Temp. 104, pulse 150, resp. 40	Died.	Positive	

Zeit that a second series of 25 cases be examined in exactly the same manner as the first, except that the proportion of blood to bouillon be lower, and results of the two groups be compared. Accordingly, in the second group, one part of blood was employed to fifteen or twenty parts of bouillon. A tabulation of the results of this second series is in the accompanying table, and the details are given in the following histories:

CASE 1.—August A., of German nationality, aged 24. Trouble began with a chill and pain in the right side, followed by fever and rusty expectoration. Physical examination showed a consolidation of left lower lobe. Admitted to hospital with a temperature of 103 F., pulse 132 and respiration 30. Blood was taken for examination during what proved to be a pseudocrisis, with a temperature of 99.6 F., pulse 108 and respiration 20. The patient died. Examination of bouillon cultures and streaks on agar was negative.

CASE 2.—Ernest McM., aged 24, a bicycle builder, was admitted to the hospital with a temperature of 100 F., pulse 136 and respiration 30. The temperature averaged 101 F. that day and 101.2 F. on the next, sometimes going to 102. Examined the following day with a temperature of 102, pulse 96 and respiration 32. The patient recovered. Examination of the bouillon cultures showed many pneumococci. Streaks on agar gave pure cultures without the capsule. Stains of the first generation by Welch's capsule stain showed remains 4,352,000 and the white, 16,000. On admission the temperature was 101.4, pulse 90, respiration 40. The following day the temperature was 103.2, pulse 100. Shortly after admission the patient complained of pain in the back of the neck. Puncture was made by a hospital interne and growths of the cerebrospinal fluid showed pure cultures of the pneumococcus. This led to examination of the blood. At this time (4 days after admission) the temperature was 101.9, pulse 80, respiration 20. Direct smears on cover glasses showed no bacteria. Cultures of blood on bouillon were found to contain many pneumococci after the second day of growth. These were mostly without capsules, although a number still retained them. Nearly all were in the form of diplococci, with a few scattered chains. Growth on agar showed the characteristic dewy form. Microscopic examination showed pure cultures of the diplococcus without capsules. As the patient showed no physical signs of lung involvement, the blood was examined for the second time. Cultures in every way identical with the first resulted after two days' growth. The patient recovered.

CASE 6.—D. P., aged 45, admitted to hospital with temperature 101.8, pulse 124, respiration 48. Rusty sputum; pain in the side, and physical signs of lobar pneumonia. Examined with temperature 103 ax., pulse 120, respiration 46. Patient died the following day. Numerous pneumococci were found in the bouillon culture, and streaks on agar yielded pure cultures of the diplococcus.

CASE 7.—John C., laborer, aged 40. Admitted with temperature of 102, pulse 102, respiration 26. Vomiting, broncho-vesicular breathing, and bronchial breathing over small area over vertebral border of right scapula. Bronchophony. Moist râles at fourth rib. Consolidation over infraspinous fossa of scapula on the right side. Examined with temperature 105, pulse 120, respiration 36. The pneumococcus of Fraenkel was found in pure culture. Patient died.

CASE 8.—William M., laborer, aged 42. Admitted to hospital with history of chill three days before, followed by fever. Pain in the right side, aggravated by coughing and deep breathing. Patient was an alcoholic who went on periodical drinking bouts. Physical examination showed crackling râles at end of inspiration; resonance diminished on posterior aspect of left side. Later bronchial breathing, bronchophony and dullness on right side. On admission, temperature 102.2, pulse 120, respiration 30, which was the average condition of the patient for three days. Patient examined on fourth day after admission, with temperature 102, pulse 120, respiration 40. He died two days later. Direct smears of the blood on cover glasses showed no bacteria present. Cultures of the blood grown in the usual manner yielded positive results.

CASE 9.—James D., laborer, aged 52. Admitted to hospital with temperature of 97.2, pulse 84, respiration 24. Although this patient had all the physical signs of pneumonia, with consolidation of entire right lower lobe, he ran almost no temperature. Apparently of the senile variety. At the time of examination, five days after admission, the temperature, pulse and respiration were practically normal, as they had been all week. Direct smears of the blood on cover glasses were negative. Growths of the blood on bouillon for two days yielded a scanty pure culture of the pneumococcus, from which confirmatory generations were grown on agar. The patient slowly recovered.

CASE 10.—Mr. H., laborer, aged 45. Admitted to hospital with a temperature of 102.6, pulse 84, respiration 38, and history of chill, dyspnea, pain in the right side and rusty sputum. Examination showed a small area of consolidation on the right side. Leucocytes 11,400. Examined three days after admission, with temperature 101, pulse 84, respiration 38. On the following day pneumococci were found in the bouillon in pure culture.

CASE 11.—Eduard D., aged 32, foreigner. On admission, temperature 104, pulse 90, respiration 32. Physical signs of consolidation. Rusty sputum showing abundant pneumococci. Had an otitis media suppurativa, with discharge from both ears, smears from which showed pneumococci. Streaks of this pus on Loeffler's blood serum yielded pure cultures of the micrococcus pneumoniæ. Culture of the blood was made on the fourth day after admission, with a temperature of 100, pulse 70, respiration 26. Examination the following day showed the pneumococcus present in pure culture. Patient recovered partially and then had a relapse. At this time his blood was examined a second time with results identical with those recorded above.

CASE 12.—Mrs. Hulda J., aged 35. Her case was not examined primarily for this series, but has been put in because of the later developments. She had what was thought to be an irregular typhoid or paratyphoid running some temperature for several weeks. The Widal could not be obtained in spite of repeated trials. No plasmodia could be found. The temperature continued irregular up to the time of examination, on which date the temperature was 102.4, pulse 107, respiration 26. No pneumococcemia had been suspected, but blood cultures were made as an experiment. On the following day cultures appeared which were so characteristic of the pneumococcus that examination was made microscopically at once. A few encapsulated pneumococci were found in each field. Many tests were made to rule out accidents. Streaks on agar showed many diplococci under the microscope. In neither medium was any other organism found. On the following day the feces were examined. Among the ordinary bacteria present were large numbers of encapsulated pneumococci; rarely in chains of three or four; nearly always in diplococcus arrangement.

CASE 13.—Harry P., aged 30. Admitted to hospital with temperature of 102, pulse 136, respiration 32. History of chill six days before entrance, pain in the side, anorexia, headache, etc. Uses alcohol moderately, smokes to excess. Physical signs of lobar pneumonia of right chest. Temperature continued high until day of examination, three days after admission, on which date temperature was 103.2, pulse 130, respiration 80 (patient was taking oxygen). Bouillon remained sterile. Streaks on agar yielded no growth.

CASE 14.—Joe C., aged 24, entered hospital with temperature of 102, pulse 138, respiration 30. Examined two days later, with temperature 102.4, pulse 110, respiration 28. History of pain in right side, increased by coughing. Chills. Constant cough. Pneumococci in the sputum and physical signs of pneumonia. Cultures of the blood on bouillon yielded the pneumococcus after two days' growth. Confirmed by pure cultures on agar.

CASE 15.—Miss Nellie C., aged 22. Admitted to hospital with temperature of 103.2, pulse 120, respiration 42. History of chill followed by pain in the side. Many pneumococci in the sputum, and physical signs of pneumonia. Blood examination was made two days later, with temperature of 102, pulse 128, respiration 34. Cultures remained sterile. Four days after examination, she developed a pneumococcic arthritis, her temperature remaining high. A second examination of the blood was then made. This time many pneumococci were found in pure culture. Streaks on agar confirmed results of the bouillon. The patient slowly recovered.

CASE 16.—George A., Greek, laborer, aged 40. Contracted bronchitis after sleeping in a tent. Eight days later had a severe chill. Entered hospital with a temperature of 100.4, pulse 76, respiration 20. Examination showed physical signs of pneumonia. Blood culture was made four days later, with a temperature of 100, pulse 80, respiration 38. Examination was positive.

CASE 17.—Pat R., laborer, aged 50. Admitted to hospital with temperature of 101.4, pulse 104, respiration 40. Physical signs of lobar pneumonia. Many pneumococci in the sputum. On examination, the temperature was 100.4, pulse 104, respiration 32. Culture media remained absolutely sterile.

CASE 18.—Gus W., waiter, aged 22. Admitted to hospital with temperature of 100, pulse 108, respiration 28. History of chill three days before, followed by pain over the entire body; cough which grew worse, and rusty sputum. An alcoholic. Physical signs of lobar pneumonia. Examined five days after admission, with temperature of 101.2, pulse 92, respiration 36. Cultures showed a few pneumococci in each field. Agar streaks were confirmatory.

CASE 19.—Simon MeV., laborer, aged 55. Admitted to hospital with temperature of 100, pulse 88, respiration 28. History of chill, followed by pain in the right side. Physical signs of consolidation of the right upper lobe. On examination the following day, temperature was 100.6, pulse 104, respiration 32. Blood showed a few pneumococci after two days' growth. The patient recovered.

CASE 20.—William H., laborer, aged 56. On admission, temperature was 104, pulse 132, respiration 30. History of chills, fever, pain in the side, anorexia, rusty sputum. Drank whisky to excess. Physical signs of consolidation of the left lower lobe. Patient was examined two days after admission with a temperature of 103, pulse 128, respiration 48. Cultures showed a few pneumococci present in each field. The patient died.

CASE 21.—Herman E., aged 45. Admitted to hospital with temperature of 101.8, pulse 110, respiration 40. History of chill, pain in the right side, and cough. Physical signs of a lobar pneumonia. Drinks alcohol regularly but moderately. Examined five days after admission, with temperature 101, pulse 96, respiration 30. Culture was tested two days later and found to contain a few pneumococci. Agar streaks were positive. The patient recovered.

CASE 22.—Patrick D., a driver, aged 40. Admitted to hospital with temperature of 100.4, pulse 94, respiration 26. Physical signs of consolidation of left lower lobe. Blood was taken for examination following crisis, with a temperature

of 97.6, pulse 72, respiration 30. Examination of the culture two days later showed many pneumococci. Patient recovered.

Case 23.—Harry Van C., stableman, aged 47. Admitted to hospital with temperature of 101.2, pulse 120, respiration 50. History of chill, cough and pain in the right side. Had physical signs of a right lobar pneumonia. The patient was examined the third day after admission, at which time his temperature was 99.8, pulse 112, respiration 36. Cultures of the blood on agar and bouillon remained sterile. The patient recovered.

Case 24.—John K., colored, aged 27. Admitted to hospital with a temperature of 101.6, pulse 136, respiration 36. History of chill, shortness of breath, etc. Physical signs of right lower lobe pneumonia. The temperature came down nearly to normal and then went up again. Blood was taken during this relapse, with the temperature at 102.2, pulse 128, respiration 48. The cultures on bouillon and agar remained absolutely sterile. The patient died.

Case 25.—John E., aged 47, was admitted to hospital with temperature of 103, pulse 150, respiration 40. Presented physical signs of a pneumonia of the left lower lobe. Cultures were made on the day of admission. Examination the following day showed many pneumococci. Agar streaks were confirmatory. The patient died.

RESULTS.

The present investigation started with four questions:

1. Can pneumococci be found in the blood at any time? This must be answered in the affirmative, because of the results secured in our investigations and in those of others.

2. With what frequency may they be found in all cases? In the first series there were 3 positives in 25 patients, or 12 per cent. of the entire number. In the second series, with a method more favorable to the growth of the organism, there were 19 cases, or 76 per cent., with positive results. Of the 6 negative cases, 2 might be considered unfavorable for the recovery of the pneumococcus from the blood on account of the condition of the patient at the time of the examination. Case 1 was negative, with a temperature of 99.6 during a pseudo-crisis, and Case 23 was negative, with a temperature of 99.8, after a crisis the previous day. It is possible that, had a blood examination been made while the temperature was high, the pneumococcus might have been isolated. On the other hand, Cases 9 and 22 were positive with a subnormal temperature, showing that a high fever is not absolutely essential in pneumococcemia. In the other 4 negative cases we can offer no explanation. Nevertheless, from the results of this investigation, we are inclined to agree with A. Fraenkel[20] and Prochaska,[23] that the pneumococcus may be found in the blood of every pneumonia patient, and, with Silvestrini and Sertoli,[22] attribute negative results to unfavorable conditions for growth or failure in technic.

3. What is the simplest method of finding them? The technic has been described above. We believe the best results are obtained by taking large quantities of blood (from three to six c.c.) with a dilution of over one to twelve of a liquid-culture medium, preferably bouillon.

4. What is the prognostic value of positive results? We believe that the mere finding of the pneumococcus in the blood is of no prognostic importance whatever. Of the 19 positive cases in the second series, 69 per cent. recovered and 31 per cent. died, while of the negative cases, 33 per cent. recovered and 67 per cent. died. Hence, according to our series, no worse prognosis, at least, attaches to a positive than to a negative finding. So many of our cases, however, were associated with alcoholism that these prognostic percentages hardly represent the average. But in our cases when the organism was found in the blood of a patient who subsequently died, it was invariably present in large numbers, while, with two exceptions (Cases 2 and 15, both severe infections), few pneumococci were found in those positive cases which recovered. According to our results, then, the mere finding of the pneumococcus has a diagnostic, but not a prognostic bearing, while the finding of large numbers of pneumococci is of grave prognostic import.

I wish to thank the visiting physicians and the resident staff of the Cook County, Wesley, Mercy, St. Luke's and Charity hospitals for many kindnesses, and Dr F. Robert Zeit of Northwestern University for many valuable suggestions as well as excellent advice throughout the work.

BIBLIOGRAPHY.

The following résumé comprises practically all that has been done up to the present time on the organism in the living blood:

1. Telamon (Le Progrès Medical, 1883, No. 51) examined the blood in 25 cases of pneumonia. He found the pneumococcus twice, both times but a few hours before death. Tests of the same cases the day previous were negative.

2. Friedländer (Fortsch. der Medicin, 1884, ii, p. 333), examining the blood of 6 cases of acute pneumonia, found the pneumococcus but once.

3. Netter (Arch. Gen. de Med., 1887) reported one positive case which was complicated with meningitis and peritonitis.

4. Befani (Riforma Medica, 1890, No. 37. Referat Baumgarten's Jahresbericht, 1890, p. 63) reported that he found the diplococcus of pneumonia present in the blood of many (does not state the number) examined by him during life.

5. Boulay (Des affections à pneumoc. indep. de la pneumonie franche, Paris, 1891. Ref. Kraus. Zeitschr. f. Heilk., 1896, p. 117) had a series of 4 cases with 2 deaths, from the latter of which he reported positive results. The 2 recoveries showed no pneumococci.

6. Goldschneider (Deut. med. Wochensch., 1892, No. 14) recorded 2 positive cases with one death in a complicated case.

7. Canon (Deutsche medicinische Woch., 1893, p. 1038) in an investigation covering many varieties of sepsis, reported one case of pneumococcemia with jaundice in which blood cultures on agar showed from 10 to 15 colonies of pneumococci.

8. Petruschky (Zeit. für Hyg. und Infct., 1894, vol. xvii, p. 59) in a series of cases had 4 pneumonias, one complicated with erysipelas. Examination of the blood was in all cases negative.

9. Sittman (Deut. Archiv f. klin. Med., 1894, p. 327), had 16 cases of pneumonia with positive results in 6 cases, 5 of which were complicated with lesions in other organs, 4 of the positive cases were fatal, while of the 10 negative cases 9 recovered and one died. The positive results were obtained from one to seventeen days before death in the fatal cases.

10. Schabad (Centralbl. f. Bact., 1896, vol. xix, p. 901) in a case of pneumococcemia involving practically all the organs of the body, obtained positive results from agar growths of the blood. The first generation was encapsulated, the second not.

11. Kraus (Zeitschr. f. Heilk., 1896, vol. xvii, p. 117) in a series of 12 cases reported that the blood showed pneumococci in only one instance. This case was complicated with erysipelas. He had growths (contaminations) in all 12 of his cases.

12. Urawitz (Charité-Annalen., 1896, vol. xiv) reported one positive case with death.

13. Nicolayson (Aan. pneumokokkens Lokalisationer udenfor Lungen. Norsk Magazin for Laegevidenskaben, 1896, p. 374) reported a positive finding in a pneumococcemia 2 days before death.

14. Dufiocq (Lecons sur les bactéries pathogènes, 1897, pp. 147-8. Ref. Beco. Revue de Médecine, 1899, p. 461) in 1896 reported one positive case with death.

15. Kohn (Deut. med. Woch., 1897, No. 9) had 32 cases, with positive results in 9, of which 7 died and 2 recovered. His positive results were obtained only a day or two before death in the fatal cases. Three times the results were negative and the patient died, but one of these deaths was due in an old man to his rising from bed too early and suffering a heart collapse.

16. Kühnau (Zeitschr. für Hyg. u. Infektskn., 1897, vol. xxv, p. 492) examined the blood of 9 severe uncomplicated cases of pneumonia. In only two cases, both of which were fatal, did he find the diplococcus. Another fatal case was negative. The *Staphylococcus albus* was found 7 times and the *aureus* once.

17. Rosenheld (Mün. med. Wochenschr., 1897, p. 603) had a pneumococcemia from which during life he drew blood on glycerin-agar with negative results.

18. James and Tuttle (Presbyterian Hospital, N. Y., Reports, 1898, vol. iii, p. 44) examined the blood in 12 cases of pneumonia. Two of these were fatal, the remaining ten recovered. No pneumococci were found in the entire series of inoculated tubes.

19. Heist (Norsk Mag. for Laegevid., 1898, No. 11) in a series of 23 pneumonias, obtained the pneumococcus in two and a staphylococcus in one. Of the 23 cases 4 died and the others recovered.

30. Preble (THE JOURNAL A. M. A., Aug. 19, 1899,) reported 4 observations, in 3 of which he obtained the pneumococcus in cultures and in all by direct smears of the blood. Two died and two recovered.

21. F. W. White (Jour. Experimental Med., 1899, p. 425) reported 19 cases, 3 of which were positive; all fatal. Seven of the negative cases were also fatal.

22. Sello (Zeitschr. f. klin. Med., 1899, p. 112) reported a series of 48 cases after Slttman's method. Of these 36 were negative with 27 recoveries and 9 deaths. Twelve cases were positive with 2 recoveries and 10 deaths.

23. Silvestrini and Sertoli (Riforma Medica, 1899, No. 16, Ref. Centralbl. f. innere Med., 1900, vol. xxi, p. 135) out of 16 cases reported the diplococcus present in 15; and in 24 investigations, present 22 times. The authors are inclined to attribute negative results to failure in technic.

24. Beco (Revue de Médecine, 1899, p. 461) had 50 cases with 11 positive findings. Twenty-nine recovered, of which 2 were positive; and 21 died of which 12 were negative and 9 positive. One of Beco's cases showed the Friedländer pneumobacillus.

25. Prochaska (Centralbl. f. innere Med., 1900, No. 46) reported his first series of 10 cases, all of which were positive. He had 4 deaths and 6 recoveries after long periods. No other colonies were found. The cases were not selected.

26. Lenhartz (Man. of Clinical Microscopy. Ref. Burt, Amer. Med., April, 1902) in 1901 reported 20.7 per cent. of positive results in a continuous series of 30 pneumonias.

27. Lenhartz (Muench. med. Woch., 1901, No. 28) found the pneumococcus 3 times, streptococcus 8 times, staphylococcus pyogenes aureus 4 times and the albus once in 16 cases of pneumonia with endocarditis.

28. Prochaska (Deutsch. Archiv f. klin. Med., vol. lxx, p. 559) in 1901 reported 40 additional cases of fibrinous pneumonia, in all of which micro-organisms developed, and, in the great majority of cases, the pneumococcus. In two instances pneumococci were not found, but micrococci in chains, which Prochaska did not know whether to regard as irregular forms of pneumococci or as separate germs. Eight of the 40 cases died and the rest recovered. In none of the cases was there contamination from the skin or from the air.

29. Landi and Clonini (Deut. med. Woch., 1901, p. 296, v. reported a series of 27 pneumonias in which investigation of the blood during life gave positive results.

30. A. Fraenkel (Deut. med. Woch., 1901, Nov. Ver.) in speaking of the pneumococcus in the blood said, "I have myself very often obtained cultures in the blood. One finds them when he takes large quantities of the blood (5 to 10 c.c.) and a liquid medium like bouillon, in every case. They seem to multiply better in a liquid culture medium. In other words, since we no longer take 1 c.c. of blood for our experiments, but 6 to 8 c.c., we find the pneumococcus in the blood in every instance.

31. Cole (Johns Hopkins Hospital Bulletin, June, 1902) made cultures in 30 cases of pneumonia, all lobar except one, which was a pneumococcemia with arthritis and meningitis. Of these 30 cases 9 were positive, with death in every instance. Four of the negative patients died also.

32. Herrick (Amer. Jour. Med. Sci., July, 1902) reported a case of pneumococcus arthritis in which puncture of the median basilic and growth on agar was negative.

33. Prochaska (Deut. med. Woch., 1902, No. 21) reported his third series of cases. He had 4 pneumonias, in all of which pneumococcus was found. He had 3 recoveries and one death.

34. Baduel and Gargano (Gazzetta degli ospedali e delle cliniche, Jan. 4, 1903,) reported an epidemic of pneumonia involving 8 children in one house, many of whom had complications. The pneumococcus was found in the blood of all these cases. Method not stated.

35. Rosenow (Medicine, June, 1903) reported cultures from 83 cases, with positive results in 77.

THE USE OF SILVER FOIL TO PREVENT ADHESIONS IN BRAIN SURGERY.

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The formation of adhesions involving the cortex of the brain and its covering membranes is the rock on which the ultimate success of many otherwise brilliant and successful operations on the brain is wrecked. The harmful influence of posttraumatic and postoperative adhesions of the surface of the brain in the production of epilepsy is universally recognized, and many suggestions have been put to application by the surgeon to prevent this occurrence, but only too often do we find that after a brilliant localization of a brain tumor or other cortical lesion by the neurologist, and a faultless operation by the surgeon, the terrible fits after a momentary pause recur with all the old vigor and frequency. It is unfortunately true that operative treatment in the large majority of the cases of epilepsy due to distinct local lesions is a failure, owing to the formation or re-formation of adhesions. The adhesions which are the most harmful are those which take place between the dura and the brain. Concerning these, Schär[1] says: "One may be able to elevate a depressed bone, remove a cyst or a connective tissue scar, or a mass which is pressing on the brain, but on the other hand, it is useless to divide adhesions between the dura and pia, or pia and brain, because the same immediately after the operation inevitably re-form."

Fortunately not all surgeons entertain such a hopeless view of the subject, and many of them have devised plans for preventing the re-formation of the adhesions, which are frequently successful. When a bone flap is formed which can be replaced, it has been suggested that the dura be removed entirely over the affected area, or that a flap of dura be brought out and turned over on the outer surface of the bone flap when the latter is replaced, after the methods of Keen and Chipault. These methods, which have apparently been followed by success, permit the brain or its covering pia to lie in direct contact with the inner surface of the bone, to which adhesions are not so likely to form. As a firm dura, however, is the best means of preventing the formation of that very unpleasant complication of brain surgery, namely, hernia cerebri, it is very desirable to retain this membrane whenever possible. It has, therefore, been proposed to interpose certain substances between the dura and the brain, in the hope that thereby the formation of adhesions might be prevented.

Beach,[2] in 1890, first suggested the use of gold foil for this purpose, and two years later used it in a case of epilepsy in which convulsions had returned after an operation done two years previous. Improvement followed the use of the gold foil at the second operation. Following this, cases in which gold foil was used were reported by Estes,[3] Oliver,[4] Summers,[5] Wier and others. Oliver's case, one of epilepsy, had been operated on before and some bone removed. Convulsions recurred and a second operation was done, adhesions separated and a plate of gold foil interposed. The patient had no more convulsions up to the time of his death, which occurred suddenly at the end of four months. At the autopsy the gold plate was found in position, and had served its purpose in that it had prevented the formation of adhesions. Woolsey[6] reports a case in which he used gold foil. The case was one of traumatic epilepsy, and had been operated on previously, at which time a piece of thickened dura about two inches in diameter was removed. As no improvement had taken place at the end of ten days, the wound was reopened and "a piece of gold foil was inserted between the scalp and the brain. The gold foil was sterilized by heat, but unfortunately it came in paraffined paper, and some of the melted paraffin had adhered to its surface. There were probably some small tears made in separating the paraffin from the paper." The patient was in perfect health for several months, when his attacks recurred. Dr. Woolsey reopened the wound and found that the gold foil had not prevented adhesions of the scalp to the brain. The gold foil had broken up into particles and

1. Arch. klin. Chir., lix, 670.
2. Bost. Med and Surg. Jour., April 3, 1890, and March 25, 1897.
3. THE JOURNAL A. M. A., April 1, 1899.
4. Ibid., May 30, 1896.
5. Med. Rec., April 24, 1897.
6. Ann. Surg., 1897, vol. xxv, 630.

between them newly formed fibrous tissue had grown, forming a layer of considerable thickness, embedding the gold foil and forming firm adhesions between the scalp and the brain. Dr. Woolsey was unable to say whether this would have been the result had the gold foil been entirely intact. It was the thickest foil kept in stock by a large dental manufacturing establishment. Freeman[7] says: "I possess a specimen of foil (gold) which I placed in the trephine opening in the posterior fossa during the course of an operation for cerebellar tumor. The patient lived about three months, and during that time considerable new connective tissue had formed." No details of this case are given. He does not state the nature of the tumor, whether it was removed or not, where the new connective tissue was formed, nor where the foil was placed.

The use of thin rubber tissue as recommended by Abbe has been tried by a number of surgeons, and with apparent success by some. McCosh[8] says: "One patient on whom I operated thirty months ago carries without signs of irritation a piece of this tissue on the surface of his dura. That it may, however, act as a foreign body is shown in Case 13, and there is no proof that the so-called 'life' should be longer in its new home than it would be in the external world." The case mentioned was one in which a piece of rubber tissue had been inserted. The patient did well for about twenty months, when his convulsions recurred. Another operation was performed. "A scalp flap was lowered over the old trephine opening, which was found filled with dense connective tissue, to which the scalp was intimately adherent. A layer about one-sixteenth of an inch thick was dissected off. Under this was felt a mass of apparently cicatricial tissue, very hard except near the center, where there was a roundish nest consisting of soft, almost granulation-like tissue, in which were seen blackish particles, which were found to be scraps of rubber tissue amalgamated with the soft connective tissue into a mass the size of a small cherry. This was cut out by scissors."

The case was then treated by placing over the brain a piece of platinum foil about the thickness of a sheet of note paper. Primary union and at the end of eight weeks he had no return of attacks.

Dr. Abbe,[9] who performed the first operation on this case and introduced the rubber tissue, says that "he was not surprised that development of granulations about the rubber had ultimately broken it up and enveloped it. It simply showed nature's effort to expel it when suppuration had once started. No argument could be based on this case as to the behavior of tissue in non-suppurative cases."

In 1898, Freeman[10] recommended the lining membrane of an egg in place of the inorganic substances. He tried the membrane in two experiments on animals, but had not used it on the human subject. In 1900, Greer[11] used egg membrane in an operation on a lad who eleven years before had sustained a compound fracture of the skull and who had suffered from epilepsy since. The skull opening, which resulted from the fracture, was found filled with dense tissue. In separating this tissue some brain substance was removed. Two pieces of eggshell membrane were placed—one between the brain and the skull and the other outside the skull. The scalp was then replaced and primary union occurred. Four months after the operation the old scar broke open and left a small hole in the scalp, through which the eggshell membrane could be seen. This was pulled out in its entirety. It was still tough and showed no apparent change in its structure. The wound then closed. The subsequent history of the case is not given, so we are left in doubt whether any good was accomplished by the operation or not.

The question of closing defects in the bone by celluloid or thick gold or silver plates or by plastic operations, is not under discussion, but simply the question of the prevention of adhesions between the brain and its membranes or the bone.

The general principle of the introduction of some foreign substance has been tried in a sufficient number of cases, and with results, too, which seem to justify our belief in its efficacy.

The best material to be used and the details of technic, however, are questions still to be worked out. There are some points which appear to be well established. For instance, the traumatism incident to the operation should be as slight as possible. A bone flap which can be replaced is preferable, when possible, to the trephine opening with the bone left out. Before the introduction of any substance hemorrhage should be perfectly controlled and all blood clots removed. The substance should extend well beyond the edge of the area involved in the adhesions. There should be no openings or breaks in the substance. The material must be one which can be sterilized. The wound must heal in a perfectly aseptic manner. The question of material is not so well settled. Whether the organic substances, such as egg membrane, prepared ox peritoneum, etc., will prove of value remains to be determined. They have not been used often enough to relieve one of the theoretical doubt of their efficacy, as the case of Greer, mentioned above, is unsatisfactory. Thin rubber tissue has been used a number of times with good results. The author has a patient who has carried a good sized piece of rubber tissue in his skull for several months with an excellent result. One disadvantage of the rubber is its tendency to roll up after it has been inserted. It then not only fails to fulfill its purpose, but may be an actual cause of irritation. The author knows of one unreported case in which the rubber, which had to be removed some months after it was introduced, was found all rolled up. The rubber may also be disintegrated by granulations, as in McCosh's case.

The use of the thick, unyielding metal plates or the heavy foils, such as the No. 60 or thicker dental gold, the author believes as a rule undesirable. The heavy plates may become tilted and act as irritants or gradually work their way to the surface; or late suppuration may occur, necessitating their removal, as the author has known in one case. Of the materials thus far proposed, the author believes the thin foils are the best, and of these he prefers the silver foil. It is so thin and soft and smooth. It conforms to all irregularities of the surface on which it is laid. As many layers may be applied as may be necessary to secure a smooth, unbroken surface. It is not only tolerated very kindly by the tissues, but exerts a beneficial influence on granulating or healing surfaces. The foil may be placed directly in contact with the brain tissue, between the pia and dura, or wherever it may be necessary to accomplish the purpose desired.

7. Ann. Surg., 1898, xxviii, 455.
8. Amer. Jour. Med. Sci., 1898, cxv, 549.
9. Ann. Surg., xxvii, 671.
10. Ann. Surg., xxviii, 455.
11. Bristol Med. and Surg. Jour., 1901, xix, 42.

The author has used the silver foil in a number of cases of brain surgery, and while no claim for anything new is made, he wishes to urge its more frequent use for the purpose indicated, and with greater care in reference to the technical details above mentioned.

The following case will illustrate the application of the principle:

George P., aged 12. When three years old he fell out of a chair and injured his head. He was taken to a hospital, where he remained two weeks. After returning home he was all right for about two years, when he developed epilepsy. The attacks were of the jacksonian type, beginning in the left arm. In addition there was partial paresis of certain muscles of the left arm, and to a very limited extent of the left leg. He entered my service at the Children's Hospital, June 22, 1900. Dr. H. T. Patrick saw the case with me, diagnosed a cortical lesion involving the left arm center, and advised operation. This was done July 10, 1900.

A large osteoplastic flap was turned down, uncovering the area indicated. A subdural calcareous mass was found about 3 cms. in diameter by 1½ cms. in thickness. It was firmly attached to the inner surface of the dura as well as to the brain tissue. A dural flap was turned down and freed from the mass. In removing the mass the cortical surface of the brain was unavoidably injured, and quite a depression remained in the brain tissue. After controlling the hemorrhage, the dura was replaced and sutured, as was also the osteoplastic flap. Primary union occurred and recovery was without incident. He left the hospital Aug. 5, 1900.

Notwithstanding the fact that active treatment with the bromides was pushed after the operation, relief from the attacks only lasted about two months. They then recurred and gradually increased in frequency and severity until in February, 1902; when he again entered the hospital he was having from five to eight fits a day. The left arm was quite weak and movements impaired.

The second operation was performed February 17, 1902. The same osteoplastic flap was turned down, and the dura opened. Firm adhesions were found between the dura and the brain tissue. These were carefully separated and hemorrhage controlled. Several layers of very thin silver foil were then placed over the brain tissue, extending some distance beyond the area involved in adhesions. The dura was then replaced and sutured, and the skull closed as before. Recovery from the operation was perfect, and he left the hospital March 23, 1902. The bromid treatment was continued as before. He has been under observation up to the present time, and although it has been a year and ten months since the last operation, he has not only not had a single fit, but has improved materially in his left arm as well as in his general condition. He attends school regularly and says that he feels perfectly well.

A METHOD OF DISPENSING WITH RUBBER GLOVES AND THE ADHESIVE RUBBER DAM.

A PRELIMINARY NOTE.

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The disadvantages, inconveniences and dangers of rubber gloves and dam, as well as their theoretical advantages, are well understood and will not be commented on here. For several months past I have been endeavoring to find a material that might be applied to the hands of the surgeon and skin of the patient which would practically seal these surfaces with an insoluble, impervious and practically imperceptible coating—a coating that would not allow the secretions of the skin to escape and will not admit secretions, blood or pus into the pores or crevices of the skin, at the same time one that will not interfere with the sense of touch or impair the pliability of the skin. I have ascertained that a 4, 6 or 8 per cent. solution of gutta-percha in benzine fulfills all of these requirements, while a similar solution in acetone also meets most of the requirements. In my clinical experience in the last four months I have found that the 4 per cent. solution of rubber in benzine is the most serviceable for the hands, as it wears better on the tips of the fingers under handling instruments, sponges and tissues than the acetone solution. For the abdomen the acetone solution has the advantage, as it dries in from three to four seconds after its application, while the benzine solution takes from two to three and a half minutes to dry to a firm coating. The acetone coating when dry is only slightly adhesive while the benzine coating is sticky.

The method of application to the hands and forearms is that of simple washing as with alcohol, care being taken to fill in around and beneath the nails. The hands must then be kept exposed to the air with the fingers separated until thoroughly dry. They may then be washed in alcohol, bichlorid or any of the antiseptic solutions without interfering with the coating or affecting the skin. It wears off on the tips of the fingers if the operations be many or prolonged, when another application may be made between operations; on the remaining portion of the hands one application is sufficient for a whole morning's work.

My routine method of hand preparation is as follows: First, five to seven minutes' washing with spirits of green soap (5 per cent.) and running hot water; second, three minutes' washing with alcohol; third, after thoroughly drying I pour on the rubber solution after the method above stated, allowing it to dry without rubbing, after the surface is thoroughly covered. The coating is so thin it can only be recognized by its glazed appearance. The coating will resist soap and water washing to cleanse the hands between operations. It is removed by washing in benzine.

The abdomen or surface preparation is five minutes' scrubbing with spirits of green soap (5 per cent.), then washing with ether, followed by alcohol. The surface is then swabbed over thoroughly with the acetone or benzine rubber solution.

The gutta-percha solution is prepared by dissolving pure gutta-percha chips in sterile benzine or acetone. This was accomplished first for me by the chemist, E. von Hermann. These solutions do not stand boiling as it impairs the adhesiveness and elasticity of the coating. The advantages of this method of avoiding the dangers of infection from the hands and skin of the patient are very evident. In addition to the bactericidal properties of the benzine it prevents perspiration beneath the coated surface, and also the rubbing off of epithelia from the hands and skin surface into the wound. It does not puncture like the rubber glove, and where it wears off on the finger tips there is no accumulated epithelium or secretion beneath. It is, moreover, impermeable and precludes the ingress of infective flora or blood to the operator's skin. After operating, the surface washes clean as readily as the surface of a rubber glove. At the end of the day's work, when the hands are washed in benzine to remove the coating, the skin is very soft and smooth. The surgeon's hands are thus protected from all of the deleterious effects of daily operating, which is in itself a safeguard against infection. Inoculation and bacteriologic tests are being made and will be reported in detail

later. The simplicity and ease of application of this method, with its practical certainty of protection, should appeal to every operator.

SIMULTANEOUS EXTRA-UTERINE AND INTRA-UTERINE PREGNANCY.

REPORT OF A CASE.

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Mrs. O., aged 38, was married Oct. 2, 1902, and had menstruated regularly every 24 days until April 20, 1903, which was the date of her last period. She suffered more or less pelvic pain from that time. She was removed to St. Francis Hospital July 14, 1903.

The following history was furnished me by that institution: Family history, negative. Personal history: She had always been delicate, and particularly so since an attack of pneumonia two years ago. Menstrual history was normal, the last period having occurred April 20, 1903. Present illness began about June 14 with obstinate constipation, and severe pain in abdomen centered over sigmoid region. Her physician gave morphia to relieve the pain. Later she had severe vomiting and was given fractional doses of calomel without effect. High enemas were administered with some effect. June 20, 1903, patient aborted two-months' fetus. The abdominal pain persisted, and was most marked in the lower right quadrant; abdominal muscles were rigid. She was admitted to the hospital July 14, suffering from almost continuous vomiting, constipation amounting to obstruction and severe abdominal and lumbar pain. She was thin and emaciated, and of a sallow complexion.

Examination of the heart was negative. There was impaired resonance at the apex of the right lung in front and over the left apex posteriorly; bronchovesicular breathing posteriorly on the left side, anteriorly on the right side and subcrepitant rales on the right side anteriorly. The abdomen was distended, tender on pressure, rigid, dull in the flanks and over the hypogastrium. No tumefaction could be outlined. An evacuation of the bowels was secured July 16, after which all symptoms were somewhat relieved, but the patient became dissatisfied and returned to her home July 20.

At her home a diagnosis of abdominal pregnancy was made by Dr. R. M. Sands, who sent her to the East End Hospital, for operation, where she was admitted August 6. Throughout her illness morphia had been administered only in sufficient quantities to relieve pain, but she had become more or less addicted to the drug. She was emaciated to the last degree. A large hard mass could be felt in the right iliac region which protruded so that it could be distinctly palpated. No fetal heart sounds or bruit could be heard. The appearance of the mass and the patient's cachexia suggested malignant disease.

An operation was performed August 8. The incision was made in the median line. Firm intestinal adhesions were dissected from the anterior surface of the mass before the enveloping membranes were revealed. Haste being such an important factor on account of the desperate physical condition of the patient, these were simply incised, the liquor amnii evacuated, and a perfectly fresh fetus with the cord and placenta removed. The sac was packed with iodoform gauze to control hemorrhage, and the edges sutured in the abdominal wound. The fetus measured 10.5 cm. from vertex to rump, and was probably alive when delivered.

The patient was almost pulseless when taken from the operating table, but reacted nicely after free stimulation and hypodermoclysis. The temperature and pulse rapidly reached normal; bowels moved on the fourth day. The gauze was removed on the fourth day and fecal matter was found in it. The membranes sloughed away on the eighth day, the fecal fistula persisting. Convalescence was further complicated by the morphia habit previously mentioned. The patient was exceedingly hard to manage and insisted on returning to her home, which she was permitted to do on her promise to have the care of a trained nurse. At this time, thirty-nine days after operation, she was able to be about her room and the halls of the hospital. After her return home she declined the attention of a nurse, finally refused nourishment entirely, and died of inanition, Oct. 19, 1903, sixty-seven days after operation.

A thorough autopsy was not practicable, but a sufficient examination was made by Dr. James Ralston to determine the primary seat of the abdominal pregnancy as right tubo-ovarian. The fistulous tract communicated with the rectum and was probably due to a placental attachment at that point.

The condition which this case illustrated is the simultaneous development of an intra-uterine and an extra-uterine gestation. That fecundation is also practically simultaneous in the great majority of cases is borne out by the reports of unimpeachable cases to date. It is the phenomenon of a twin pregnancy, except that the one ovum is arrested in its course before it reaches the uterine cavity. No pathologic condition can be especially charged with its occurrence, except those which obtain in the ordinary cases of ectopic pregnancy. Cases of intra-uterine pregnancy occurring after the termination of an extra-uterine gestation do not come under this classification.

Simultaneous extra-uterine and intra-uterine pregnancy is looked on as a rare condition, and some of the latest text-books on gynecology dismiss the subject with a line and speak of it merely as one of the possibilities. Zinke[1] tabulated 88 cases taken from the collections of B. B. Browne, H. Gutzwiller, John S. Parry, E. W. Martin and Christer-Nilson, to which he adds his own collection with the report of 1 case. Vilsin[2] collected from the literature as far back as the eleventh century 68 cases, to which he adds 1 observation of his own. In 58 per cent. of the cases of this collection the women were between 30 and 40 years of age; 19 per cent. were primiparæ. In only 20 cases did both fetuses arrive at full term; in 47 both aborted, usually one before the other. The death of the mother caused the death of the immature fetus 6 times, i. e., in 10 per cent. of the cases; the intra-uterine fetus went to term in 29 cases, i. e., in 46 per cent. of the cases. In 25 cases, or 37 per cent., the extra-uterine embryo went to full term. Vilsin's most important conclusions are that interruption of the intra-uterine pregnancy had by far a slighter effect on the further development of the extra-uterine pregnancy than vice versa.

Disturbances in the blood circulation in close neighborhood to the uterus caused by rupture or abortion of the pregnant tube, are in many cases responsible for the premature interruption of the intra-uterine pregnancy. The fact that in twenty-five cases the ectopic fetus reached a full term is not considered by Engstrom[3] as a mere accident, but he believes that increased afflux of blood to the pelvis on account of the intra-uterine pregnancy improves at the same time the blood supply of the pregnant tube, thus promoting the development of the ectopic fetus.

At least twenty-five cases of simultaneous extra-uterine and intra-uterine pregnancy may be added to the tabulated record of Zinke, mentioned above. Some of these were overlooked in the preparation of the various collections and additional ones have been reported since the date of his collection on going to print. But it is more than probable that the reported cases of this

1. Journal of Obstetrics, May, 1902.
2. Ibid., January, 1902.
3. Amer. Year Book of Med. and Surg., 1903.

condition are only a small percentage of those actually occurring. No doubt many cases occur in which the extra-uterine pregnancy terminates without attracting sufficient attention to make a diagnosis or in which the symptoms are overlooked, and the intra-uterine pregnancy continues to term or aborts, or death may happen from the rupture of the ectopic sac, and the intra-uterine pregnancy be undiscovered. Again, there are those cases in which the intra-uterine abortion, in the light of an existing extra-uterine gestation, is supposed necessarily to be the expulsion of the decidua. It is a part of the history of most cases of ectopic pregnancy that the patient expelled something which was supposed at the time to be a miscarriage, and in view of the increasing number of reported cases of a co-existing intra-uterine and extra-uterine pregnancy, it is safe to assume that occasionally instead of the expulsion of the decidua it is the abortion of the intra-uterine gestation. It is also possible that in the early discovery of an ectopic pregnancy the intra-uterine gestation is destroyed by the curettement usually preceding operation on the pelvic organs. At any rate, the condition occurs frequently enough to stimulate a desire to save at least two of the three lives involved. To accomplish this it is most important that an early diagnosis of the ectopic pregnancy be made and the pregnant tube removed by operation. It is not of the utmost importance that the intra-uterine pregnancy be diagnosed, but it is well to keep steadily in mind that the phenomenon of simultaneous extra-uterine and intra-uterine pregnancy does occur, and by the elimination of the preliminary curettement in all suspected cases of a co-existing intra-uterine and extra-uterine gestation, or, better still, in all operations for ectopic pregnancy, an occasional life may be preserved.

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Clinical Reports.

VOLVULUS OF THE OMENTUM.*

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PHILADELPHIA.

Including my case nine instances of volvulus of the omentum have been recorded in surgical literature. These are as follows:

CASE 1.—Male, aged 35 years, a patient of Dr. Alfred Allman, for whom I operated. His mother, a sister and six children are living and in good health. He had never suffered from any serious illness. Four days before operation, while in the best of health, he was attacked by severe abdominal pains, which began in the epigastrium, and which later settled in the right iliac region. He vomited at this time and went to bed. The pain grew worse and the vomiting persisted. I saw the patient for the first time June 19, 1902, on the fourth day of the illness. He was a large, well-nourished man, sweating freely, and evidently suffering severe pain. His temperature was 101 F., the pulse 120, and the respirations 20. There was no hernia. The right side of the abdomen was rigid and the point of greatest tenderness was at the outer border of the right rectus muscle on a level with the umbilicus. The bowels had moved freely just before the time of examination.

A diagnosis of acute appendicitis was made and the abdomen opened through the right semilunar line. The appendix was removed and found to be normal except for three minute hemorrhagic spots beneath the mucous membrane. A further search of the abdomen was made and a mass feeling like a gauze sponge was found well above the incision. It proved to be the right lower corner of the omentum, gangrenous and twisted on itself through 360 degrees. After excision the mass measured six inches long and three inches wide. The peritoneal cavity was flushed with salt solution, and the abdomen closed without drainage. Recovery was uneventful.

The following is a report of the microscopic study of the excised tissue by Dr. Randolph: A large mass of omental tissue, dark in color and showing an abundance of adipose tissue. The mass is twisted longitudinally on itself at the point of amputation. Sections for microscopic examination were removed from the portion beyond the twist and embedded in paraffin and stained with hematoxylin and eosin. There is no necrosis of the adipose tissue. The blood vessels are the seat of extensive thrombosis, especially the smaller veins. Much of the blood in the vessels is extensively disintegrated. In some places there is extravasation of the disintegrated blood and pigment which infiltrates the neighboring connective tissue. The changes are those which would be brought about by interference with venous return.

CASE 2.—Oberst,[1] 1882: Male, aged 35 years. Right inguinal hernia for 12 years. Symptoms of irreducible hernia for two days before operation. The diagnosis before operation was irreducible hernia. At operation the sac was found to contain incarcerated omentum due to torsion, the torsion being entirely within the hernial sac. The probable etiology was forcible attempts at reduction.

CASE 3.—Bayer, 1898: Female, aged 54 years. Left inguinal hernia 15 years. Following an attack of coughing there were severe pain in the hernia and a feeling as if a round object were revolving inside it. On the following day a diagnosis of strangulated hernia was made and operation undertaken. The omentum was found adherent to the mouth of the sac by a band forming one support, the other being the intra-abdominal pedicle of the omentum. Around these two points the omentum was revolved just as a triangular handkerchief that is held at two ends could be, the pedicle being twisted four or five times on itself. There was beginning gangrene of the omentum at the peripheral end, which was pushed back through the inner half of the hernial ring. The probable etiology was a severe attack of coughing.

CASE 4.—Baracz, 1900: Male, aged 42. Left inguinal hernia for several years. Symptoms were those of strangulated hernia and a diagnosis was so made. The lower part of the omentum was thickened, dark in color, and turned several times around its axis. The hernial sac was empty except for some clear fluid and a band which ran from the base of the sac up through the inguinal canal into the strangulated omentum. The probable etiology was lifting a heavy trunk, followed by attempts at taxis.

CASE 5.—Peck, 1900: Female, aged 37 years. Right inguinal hernia for 12 years. The symptoms were abdominal pain, vomiting, and slight fever. A tumor could be felt in the abdomen, and a diagnosis of suppurating ovarian cyst was made. The tumor was made up of the entire omentum, a tightly twisted pedicle being found just below the transverse colon. There was no connection between the hernia and the omentum, but there were some old adhesions between the omental mass and the right ovary. Microscopic sections showed chronic inflammatory changes and the extravasation of beginning strangulation. Etiology unknown.

CASE 6.—Hochenegg, 1900: Male, aged 41 years. Right inguinal hernia for 30 years. Twenty-four hours before the onset of symptoms the hernia became larger and could only be reduced with the greatest difficulty. The symptoms, which were present for two days before operation, were abdominal pain, distension, vomiting, fever, and a mass in the right iliac region. A diagnosis of appendicitis had been made. The tumor consisted of strangulated omentum, was the size of a man's head, was nowhere adherent, and had a slender pedicle twisted on itself three times from right to left. The probable etiology was attempts at reduction of the hernia.

CASE 7.—Wiener, 1900: Male, aged 79 years. Right inguinal hernia for 30 years. The symptoms were pain in the right

* Read before the College of Physicians of Philadelphia.

1. Cases 2 to 7, inclusive, are abstracted from Weiner's valuable paper on "Intra-abdominal Torsion of the Omentum," Annals of Surgery, November, 1900.

iliac region, which had come on suddenly four days before operation, slight fever, and a tumor in the right abdomen. A diagnosis of intraperitoneal abscess was made. A piece of omentum as large as the palm of the hand and dark blue in color was found. Its distal portion was adherent to an epiploic appendage on the ascending colon and its proximal portion was continuous with the remainder of the omentum by a narrow pedicle, which was twisted on itself five or six times, causing strangulation of the portion of the omentum affected. Etiology unknown.

CASE 8.—Baldwin,[2] 1902: Male, aged 47 years. Hernia not present. Typical symptoms of appendicitis were present for three days. No tumor could be felt. A diagnosis of acute appendicitis was made. The omentum was rolled up so as to make a distinct tumor with a small pedicle, which was twisted on itself eight times, the entire mass being about the size of a large fig. Etiology unknown.

CASE 9.—Blake,[3] 1903: Male, aged 45 years. Right inguinal hernia for 20 years. Three days before admission he had pain in the right side of the abdomen and in the hernia. Attempts at reduction were unsuccessful and painful. The lower right quadrant of the abdomen was filled with a mass which reached to the middle line. A diagnosis of probable appendicitis, with a peritonitis spreading into the hernial sac, was made. The omentum was gangrenous and twisted through four and a half turns at its attachment to the transverse colon, constricting it to a rope-like mass one and one-fourth inches in thickness and four inches long. The lower end of the omentum entered the sac of the hernia and had been retained there by the thickness of its extremity. Probable etiology, attempts at reduction of the hernia.

Summary.—Seven of the cases were males, two females. The ages of two were 35, one 37, one 41, one 42, one 45, one 47, one 54, and one 79. The omentum was connected with the hernia in five of the seven cases in which a hernia was present. The symptoms were acute in all and pointed toward some serious intraperitoneal lesion. The diagnosis was not made in any case; two were diagnosticated strangulated hernia, one irreducible hernia, four appendicitis, one intraperitoneal abscess, and one suppurating ovarian cyst. The tumor could be palpated in five; in four no tumor could be felt. There seems to be no way suggested by which a diagnosis may be reached. A movable, doughy tumor coming on quickly after attempts to reduce a hernia should make one suspicious of omental torsion. A count of the leucocytes may contribute in differentiating this condition from an abscess. A blood count was not made in any of the above cases. In all of the cases the importance of immediate operation was recognized. The extent of omentum involved varied from a portion, the size of a large fig, to the entire omentum forming a mass the size of a man's head. The tip of the omental mass was fixed in six cases, thus forming two supports between which the omentum might turn. The cause of torsion was forcible attempts at reduction of a hernia in four instances, severe coughing in one, and unknown in four.

Comments.—It is easy to understand how a twist in the omentum may be produced by forcible taxis of an epiplocele, by cysts or tumors of the omentum which develop irregularly, by a careless operator who fails to smooth out the omentum after an abdominal operation, and by contraction of the abdominal walls or movements of the intestine in those cases in which the tip of the omentum is adherent, but the explanation is difficult in those cases in which an apparently normal omentum revolves on its own axis in an apparently normal abdomen, as in two of the reported cases. As the result of experiments on animals, Payr[4] is convinced that overdistension of the spirally disposed veins of the omentum would produce a twisting of that structure.

Weiner[1] emphasizes a practical point of some value in those cases of hernia in which there have been symptoms of strangulation and in which only a strand of omentum is found in the sac at the time of operation, by insisting on a thorough investigation of the intra-abdominal portion of the omentum for torsion.

A study of these cases impresses on us an additional danger in employing forcible taxis and serves to fortify the conviction already formed that strenuous efforts to reduce a hernia are exceedingly hazardous.

2. Annals of Surgery, December, 1902.
3. Annals of Surgery, July, 1903, p. 99.
4. Archiv f. klin. Chir., vol. lxviii, No. 2, 1902.

TWO CASES OF INFANTILE MYXEDEMA

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There are no less than six cases of infantile myxedema, resulting in a cretinoid condition, in Iowa, and probably many more. Since the condition is frequently unrecognized, it is possible that the accompanying photographs of the two cases occurring in my practice may help to call attention to the value and importance of early treatment.

CASE 1.—E. M.[1] was first seen when 20 years and 4 months of age (Fig. 1). Thyroid feeding was at once begun. Improvement was rapid even at this late age. In the first 18 months the increase in weight was 13½ pounds, and in height was 5¾ inches (Fig. 2). She now, at nearly 23 years of age,

Fig. 1.—Case 1. E. M., age 20 years and 4 months, at beginning of treatment.

appears as a bright active child of 7 or 8 years, with, since treatment was begun, an entire new growth of hair, new teeth and a normal soft skin.

CASE 2.—P. B., born in Iowa, was seen first when 8 years and 5 months of age (Fig. 3). Her family history was good. The mother gives the past history as follows: The labor at her birth was easy, no physician being present. The baby weighed 9 pounds. At two weeks a "blood tumor" appeared on the forehead and grew to the size of a walnut. At 4 months this tumor was removed under chloroform anesthesia. Whooping-cough was the only other sickness until she was weaned and began teething at 18 months of age. At 18 months she was "sick all winter," lying in her buggy all the time, and having a yellow color. Teething continued to the sixth year. She has never walked except by holding to chairs, and has never learned to speak but a few words. She has had alternating diarrhea and constipation and at times vomiting. Though always sleeping well, she eats very little, at many meals not more than two teaspoonfuls of food. She has never had spasms and the eyes have never been crossed.

1. Reported with early photographs in the Medical Fortnightly, May 26, 1902.

Fig. 2.—Case 1. E. M., age 21 years and 11 months, after one year and seven months' treatment.

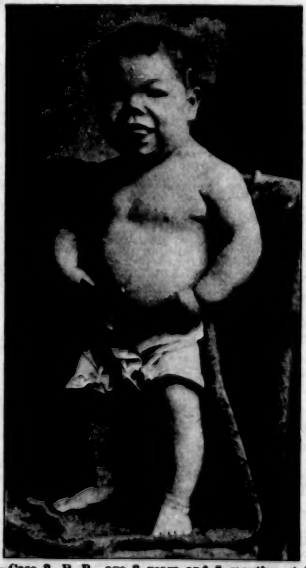

Fig. 3.—Case 2, P. B., age 8 years and 5 months, at beginning of treatment.

When first seen, Nov. 25, 1902, this child, 8 years, 5 months old, had the fontanelle open. The suture lines of the skull were depressed. The thick tongue protruded and the saliva constantly dribbled from the mouth. The child would sit continually in an apathetic condition or would stand supported by a chair. The hair was coarse, the skin dry and wrinkled, and only first teeth were present. The abdomen was prominent, the legs bowed and the spine curved so that the chin rested on the thorax.

Thyroid feeding was begun at once. Beginning with one-half of one tablet after each meal, the amount was rapidly increased until two tablets were given three times a day. In two weeks she became brighter and more active. There was at first a loss in weight and then a rapid gain.

In one year from the beginning of the thyroid feeding, the gain in weight has been 14 pounds, and the gain in height 7¼ inches (Fig. 4). Two new teeth have appeared and her

Fig. 4.—Case 2. P. B., age 9 years and 5 months, after one year's treatment.

hair is all new and soft. She runs about, eats well and is learning to talk. The photographs show better than words the transformation.

A Tropical Clinical Thermometer.—Baldwin describes in the London *Lancet* (January 30) a thermometer to take the temperature of a patient when the atmospheric temperature is greater than that of the patient. The ordinary clinical thermometer can not be shaken down below the register of the atmospheric temperature. The new thermometer is made without the stricture or bend for registration. It is, therefore, a minimum thermometer, that is, it will register the lowest temperature. The thermometer is made longer than ordinary, so that it may be read without removal from the mouth or axilla, because it will commence to change immediately on removal. It also has a vacuum bulb at the distal end to provide against expansion, as ordinary thermometers sometimes burst when the temperature reaches 110 degrees.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

103 DEARBORN AVENUE .... CHICAGO, ILL.

Cable Address ... "Medic, Chicago"

Subscription price ..... Five dollars per annum in advance

SATURDAY, MARCH 19, 1904.

THE MEDICAL WORK IN HOSPITALS FOR INSANE.

An important treatise by Dr. Paul Sèrieux on the care of the insane in France, Germany, Switzerland and Italy, is being issued by the Municipal Press of Paris. We are accustomed to the difficulties in the medical administration of American hospitals for the insane, and are prone to think that they order these matters better in France; but it is interesting to find that precisely the same difficulties as our own confront the physicians in charge of foreign hospitals.

Dr. Marandon de Montyel, the head of a large asylum, is quoted as saying that if he and all of his colleagues were frank they would confess that it was impossible for them to know their own patients. Another physician, Dr. Brousse, asks how a medical superintendent can know his patients, when they number from six hundred to fifteen hundred. After showing that in order to examine an average number of nine hundred patients once a week, a man can devote only three minutes to each case, he ironically inquires: "How can one in three minutes make a minute psychologic analysis, an extensive physical examination, an inquiry into antecedents and heredity, and then proceed to gain the confidence of his patient and prescribe the proper course of treatment? In the face of this manifest impossibility, the only thing to do is to select certain cases, and naturally one chooses the most interesting. The others are left to their madness. The acute cases become chronic, and remain permanent inmates of the asylum which they cumber."

Dr. Sèrieux makes a sweeping indictment against the large institution, saying: "Thus it is true that not only are many of the insane not given treatment, but they are allowed to become—I had almost said they are made—incurable when they might have been cured. And the number of these is relatively large. Under such circumstances, an insane patient who recovers does so because of his own recuperative powers, for he has nothing to depend on but the vis medicatrix naturæ. Fortunately this is sometimes powerful enough to repair the ravages which the ignorance and stupidity of men only succeed in aggravating instead of checking."

The physician, according to this authority, is reduced to the rôle of registrar, farmer and hotel keeper. If a farming establishment is connected with the asylum, he will superintend its operations. He must be responsible for the bakery and the kitchen, and above all he must sign stacks of papers and certificates, which, however, are really given out blindly; he must keep elaborate records when he ought to be examining and caring for his patients. Every day he makes a visit to the wards. And what a visit! A review *en bloc et au galop*, like a colonel passing in front of his regiment, a summary, hasty inspection which has fully as much to do with the conditions of the ward as of the patients. The *mise en scène* of this function is often carefully arranged to enhance the dignity of the superintendent. "But," Dr. Sèrieux asks, "what is the use from a medical point of view of this procession, with the superintendent at the head, followed by an escort of assistants, nurses and attendants? Such a visit is as inefficacious as it is ceremonious. It takes cognizance chiefly of the noisy patients, may have a subduing influence over them, and has been felicitously called 'police therapeutics.'"

Whoever is familiar with the American hospital for the insane must recognize that this description applies well to many of them. The great problem of hospital administration in the United States, as in France, is how to restore the physician to his rightful domain. At present in America, the physician in charge is made general superintendent, in an effort to avoid a clash of authority between a medical head and a business manager. Various other experiments have been suggested and even tried. We have had the business superintendent with a medical staff supposedly supreme in its sphere, yet necessarily limited and unauthoritative. From this we have quickly swung back to the usual plan of a physician-superintendent.

Three states, Iowa, Wisconsin and Minnesota, administer the affairs of their charitable and even penal institutions by boards of control, consisting of paid officials appointed by the governor of the state, and whose duty it is to make purchases and contracts for the whole group of institutions under their charge. The theory underlying the creation of such bodies is, of course, that the centralization of responsibility which the business world has found so effective and profitable, will prove equally advantageous in public financial operations. But from our point of view its most important result is, that if properly administered, such a board would free the superintendent from many of the irksome non-medical cares which now infest his day. The work of such boards has been, perhaps, too brief and too limited by various circumstances for us to be able as yet to judge fairly how far they can effect this object.

Doubtless the most intelligent experiment in this country is shown in the New York Lunacy Commission. The material care of the 23,000 insane persons who are the wards of the State of New York is in itself an enormous business, justifying the application of the most approved business methods, and it was natural on that ground alone that there should be an effort to make

purchases in the largest quantities and at the lowest rates. The commission, as is well known, consists of three salaried commissioners, one of whom is a lawyer, and one of whom must be a physician. Observers of New York conditions have viewed with some concern the recent tendency to make the commission more and more bureaucratic. The question is a nice one: How to secure centralized responsibility in business matters, how to correlate the medical work of the various institutions, how to secure a general medical *esprit de corps*, yet without sacrificing the personal responsibility and power of initiative which the physician must retain.

To our minds the whole subject of institutional administration deserves from the profession a degree of attention it has not received thus far, and the fact that the same difficulties are felt the world over only emphasizes this need.

THE TREATMENT OF PNEUMONIA.

What is needed in the treatment of pneumonia is not more drugs, but the discriminating and intelligent use of those we have. We need to steer clear of therapeutic nihilism on one hand, and of overdoing and polypharmacy on the other. To declare, because there is as yet no specific for the disease, that drugs and medical treatment are valueless, is as absurd as it is to pour useless or even harmful drugs into the patient as soon as the diagnosis is made.

The temptation to overtreat is great. Recognizing the grave nature of the malady, knowing its rapid course and its tendency to suddenly developing complications, importuned by anxious friends to relieve annoying symptoms and to keep doing something, we too often yield to the pressure and, before we are aware, have gotten into the narrow path of treating the disease and not the patient. We soon begin to talk of "my treatment for pneumonia," and we are humbugged into believing in the efficacy of our pet remedies, though to an outsider it is clear that too often we are doing harm. It would be a fine clinical lesson if each medical student before graduation could have the chance of watching, say one hundred cases of pneumonia—and of other acute infections, too—and thus have the lesson of the tendency toward spontaneous recovery firmly ground into his mind. It would be most valuable capital on which to begin his practice of treating infectious diseases.

On the other hand, the physician who has seen cases die—and he is generally a hospital physician—in spite of medicine, and other cases recover without any drug at all, is apt to become skeptical and declare that there is no treatment for pneumonia except for its surgical complications, and that the patient's only hope is in his resisting power, the *vis medicatrix naturæ*. Such a view is as narrow-minded and ridiculous as the opposite; such practice has had the negative virtue of not being directly harmful, but its sins of omission may be many.

The treatment of pneumonia is discussed in a judicial tone by Dr. Gilman Thompson in this issue of THE JOURNAL.[1] His advice regarding the general uselessness of expectorants, external applications and the so-called specifics, is timely. This advice has been given many times, yet it will, we fear, be thought by many readers to apply to the other fellow. But if the cap fits, let us put it on. How can we consistently and conscientiously give to our patients enormous doses of digitalis, creosote, guaiacol, sodium salicylate, etc.—doses that if given to him in health, we should declare were toxic and plainly responsible for nausea, vomiting, cardiac weakness, albuminuria, delirium and other untoward symptoms? Yet we pour in the huge amounts because we have seen—probably in an abstract—that some one, usually an obscure writer, but with a German name, has declared his belief in the efficacy of such and such a medicine. Thompson, it will be seen, believes in drugs. He knows, as does every physician of experience, that he has saved lives by their timely use. But he warns against the overstimulation of the heart, against overfeeding, against the too free use of that two-edged sword, morphin. Morphin in pneumonia, by the way, always seems to us like the revolver in the home—a weapon that should be kept on the shelf out of reach of the children, for while of inestimable value at the right time, it is capable of doing incalculable harm, and only the experienced ones should handle it. The constant annoying of the patient by too frequent sponging, moving, giving of food, medicine, etc., is a point that should be brought home to us all. Rest and sleep are sometimes of far greater value than drugs.

Why can we not have for pneumonia, as for typhoid, a few broad general principles of treatment? Why not admit that at present there is no specific, and so stop the indiscriminate and harmful practice of overdrugging? A therapeutic nihilism, on the other hand, is equally bad. Drugs and other remedial measures are indispensable, and properly used save lives, but they should be employed only when needed, and then as needed by the particular case in hand. Let there be individualization in the treatment of this disease.

SOLUBLE BACTERIAL TOXINS.

When Roux and Yersin discovered that the filtrate of an old broth culture of diphtheria bacilli is strongly toxic for guinea-pigs; and when it was later shown by Behring that the serum of an animal which had been repeatedly injected with small and gradually increasing quantities of this toxin is capable of protecting another animal against a fatal dose of the toxin or of living diphtheria bacilli, it was thought that the problem of infectious diseases had been solved. It was soon found, however, that these discoveries are not capable of universal application because, aside from the diphtheria bacillus, the bacillus of tetanus is the only organism that has thus

1. See page 747.

far yielded a powerful toxin when grown in the ordinary culture media. In the case of other organisms, the experience has been that, not having a toxin to work with, it has been impossible to prepare a satisfactory antitoxin. Of late years, numerous attempts have been made to get soluble toxins from other bacteria by growing them in specially prepared media or by treating the organisms in a special way after they have been scraped off a solid medium on which they were grown, and some of these efforts have been crowned with a fair degree of success.

Brieger and Mayer have found that typhoid bacilli when grown on a solid medium, scraped off and macerated for several days in a weekly alkaline solution of ammonium sulphate, give off specific substances which are capable of imparting strongly agglutinative and bactericidal properties to the serum of an animal that is repeatedly injected with the sterile solution. These solutions, although they contain specific bacterial products, are not toxic for experimental animals, and it seems that they for that reason can be of no great value in the preparation of an antityphoid serum which can be used successfully as a therapeutic agent. Conradi macerated typhoid bacilli and dysentery bacilli in .85 per cent. salt solution, and thus obtained solutions that were highly toxic for rabbits and guinea-pigs. The suspension of bacilli in salt solution is kept at incubator temperature for twenty-four to forty-eight hours, and under these conditions the bacilli undergo autolysis, liberating the toxins which are contained in their bodies. Macfadyen and Rowland, as we have pointed out,[1] prepared a highly toxic extract of typhoid bacilli by grinding up the organisms at a very low temperature and exhausting this mass with physiologic salt solution. More recently,[2] they have applied this method to streptococci, to *Staphylococcus pyogenes aureus, Bacillus enteritidis, Bacillus tuberculosis* and *Bacillus diphtheriæ* with equally satisfactory results. A 10 per cent. extract of streptococci, for instance, killed guinea-pigs within six hours when 0.1 c.c. was injected intraperitoneally. The results with staphylococci and *Bacillus enteritidis* were equally favorable.

Several attempts have also been made to get soluble streptococcus toxins by growing a virulent organism in special media. Marmorek prepared a medium containing glycocol and leucin, and asserts that he obtained a powerful toxin in this medium. The streptococcus, which was very virulent, was allowed to grow in the medium for eight days, when the culture was filtered and the filtrate tested on rabbits. The streptococcus used in these experiments had its toxin-producing power augmented by growing it for several generations in a leucocyte exudate obtained from a guinea-pig which had been injected with several doses of antistreptococcus serum. Besredka grew a virulent streptococcus in heated rabbit's serum, and thus obtained a special hemolysin secreted by the streptococcus, in the filtrates, but these filtrates were not toxic for rabbits. Recently, Simon[3] also prepared a toxin by growing streptococci in special media for three to eight days and filtering. He obtained leucocyte exudate from the pleura of rabbits, centrifugated the leucocytes out, and grew the streptococci in this liquid or in a mixture of it and bouillon. Filtrates from the cultures killed rabbits in doses of 2 to 7 c.c., but the time of death was very indefinite, varying from two to twelve days. Simon believes that a streptococcus, in order to secrete toxin, must meet a certain resistance to its development in the medium in which it is grown, and that this resistance is furnished by something in the leucocyte exudate. It seems now that those organisms which have been supposed not to secrete a soluble toxin do after all secrete their poisons, but in some instances, at least, they must be stimulated by the animal cell juices before they secrete toxins. It now remains to be seen whether or not it will prove possible by means of these specially prepared toxins to secure potent antiserums with actual therapeutic powers—the ultimate good of all this work.

1. THE JOURNAL A. M. A., Dec. 5, 1903.
2. Centralbl. f. Bakt., xxxv, 1904, 415.
3. Centralbl. f. Bakt., 1904, xxxv, 440.

PROFESSOR EHRLICH'S VISIT TO CHICAGO.

Next week the University of Chicago confers honorary degrees on a number of distinguished German scholars. The representative of German medicine selected for this conspicuous honor is Prof. Paul Ehrlich, director of the Royal Institute for Experimental Therapy at Frankfurt a. M. Ehrlich's name is one of the most familiar in the medical annals of our day. His earlier investigations into the morphology of the blood, and especially his differentiation of leucocytes, are known to every physician. His real fame rests on his theoretical investigations of the fundamental problems of immunity. A backward glance through the editorial pages of THE JOURNAL will show quickly the extent to which the Ehrlich lateral or side-chain theory has dominated the researches in this field during the last few years. This theory has not only made clear to us many observed phenomena, but has also been fruitful of important investigations, the results of which have been and will continue to be of great significance to therapy. Ehrlich's method of quantitative measurements of diphtheria toxin and antitoxin has been of the greatest service in serum therapy, at the same time as it has led to the establishment of the chemical nature of the interaction of these substances. It is of great interest to watch the steady growth of the chemical conception of the mode of action of the toxins, lysins and antibodies that have come to our knowledge within recent years. To Ehrlich will belong the great honor of the first fruitful theoretical foundation of the new science of immunity. Certainly the outlook for

further results of direct therapeutic value from research in this field is most promising.

Since Ehrlich came to Frankfurt to direct the newly established Royal Institute for Experimental Therapy, many brilliant researches have been carried out under his supervision, and among them are certain noteworthy ones by American workers. In addition to research, the institute exercises governmental control of the curative and other sera manufactured in Prussia. All sera placed on the market must bear the imprint of having been found by this institute to be pure and to reach certain standards. This is a most important function. It guarantees the public the best products of serum therapy—an official guarantee that is not yet provided in this country.

A short time ago special arrangements were made whereby the scope of the institute was enlarged so that it could take up the problem of the etiology of cancer. Some results of this line of work have already been published, as, for instance, observations on epithelioma contagiosum in fowls, which is shown to be caused by a most interesting filterable, hence, probably, ultramicroscopic virus.

We understand that on March 21 Professor Ehrlich will deliver at the university a public address on "Modern Theories of Toxins and Antitoxins."

When the University of Chicago invites Professor Ehrlich to come to this country to receive an honorary degree under the circumstances mentioned, it is investigation in medicine that is placed on high as one of the ideals of German scholarship. We as a medical profession gladly join with the university in this recognition. To Professor Ehrlich we would express a deep sense of indebtedness for his devotion of his great gifts to theoretical investigation which has brought results that vitally affect human welfare.

DRUGGIST ETHICS.

There was a time when the drug store was really an apothecary shop for the dispensing of drugs on prescription of physicians. Now the average city drug store, at least, has become a bazar in which almost everything under the sun, and a few other things beside, can be purchased at cut prices. There are undoubtedly many things apart from the materials used for prescriptions that might properly find a place in a drug store. But the present heterogeneous collection of things so overshadows the original purpose of the institution that it is easy to understand how prescription filling becomes a very secondary department, with consequent neglect of due attention to this originally most important function, and there follow the evils of substitution, since the already crowded store has no room for the variety of drugs that may legitimately be called for.

There is another phase of present customs in the drug store that is even more striking and less desirable. Druggists' windows are usually covered with signs and advertisements recommending patent medicines and disgusting references to and indorsement of "lost-manhood" fakes and abortifacients. One is apt to find such catching phrases as "We recommend So and So's tonic," or "We know the value of Dr. X's cough medicine," or "Dr. Y's Successful Prescription for Women. Come in and let us tell you about it." Or, "Ask the drug man and he will tell you what to take for that cold," or "that backache." Sometimes these are illuminated announcements, which presumably show the personal interest of the druggist in these remedies. In a few cases, where such announcements have been noticed, the tonics so plausibly recommended contain nearly as much alcohol as the whiskey that is sold over the bar in the ordinary saloon. As the amount to be taken is from three to six tablespoonfuls, that is, one and a half to three ounces a day, it is easy to understand how some women, and what is, if possible, worse, some children, acquire the liquor habit in what is presumed to be an incomprehensible way.

The majority of druggists in our large cities now seem to consider it the proper thing, not only to push nostrums of others, but to have those of their own, or at least those that bear their names. None of these remedies is, as a rule, such as can be taken with impunity by the ordinary patrons of a drug store. The cough medicines are often a favorite remedy of incipient consumptives, and as they usually contain opium, they tend to lock up the bowels, decrease the appetite, lessen the secretions and consequently lower resistive vitality, while they make the chances of reinfection by keeping infective material within the lungs much greater than before. With regard to headache powders, there seems to be no doubt that some of the increase in the sudden death rate in our large cities noted in the last ten years is due to the careless and frequent employment of depressant coal-tar remedies which are so easy to procure under the name of headache powders.

Beside this, many druggists consider it perfectly proper to give medical advice with regard to supposed minor ailments. There is certainly no physician doing work in the dispensary service of a large city who has not had cases of pneumonia, especially in young strong patients, who have applied to druggists and obtained some remedy that for a time has delayed their application to a physician for treatment. Needless to say, if the delay is long, that is, if the patient is encouraged to remain on his feet for twenty-four to forty-eight hours after he has felt the first symptoms of his affection, the prognosis of the case is extremely unfavorable. There are other classes of cases, especially the beginning infections, such as typhoid fever and even smallpox, where the facility with which a druggist prescribes for symptoms keeps patients from applying to a physician and learning their true condition before inflicting fatal injury on themselves or causing great danger to others.

It is very evident, then, that medical practitioners who have the good of their profession and the health of the community at heart, must discourage these unethical practices. It is no use to say that rents are so high that druggists must do much more business than that which comes to them in the filling of prescriptions and the proper dispensing of drugs. The reason why rents are so high is that druggists insist on having their stores on important business corners for the purpose of attracting the class of trade who buy the unethical goods they sell. There is no reason why properly conducted drug stores should not occupy much less conspicuous places than those which are now the favorites, and by so doing revert to the ethical institutions they were before. Commercialism has invaded entirely too much the proper domain of drug dispensaries, and it seems time for concerted action on the part of the medical profession to bring about the necessary reform. Meantime, much may be done to discourage the growing evil if physicians will encourage the filling of their prescriptions at pharmacies, where more attention is paid to the proper dispensing of legitimate medicines than at the almost department-store variety shops that maintain a counter for prescriptions, but very evidently consider this an entirely secondary feature of their business.

AUTO-DISPENSING.

The custom of dispensing medicines has been much more general among British practitioners than in this country. In fact, in a large practice it is not infrequent there for a physician to employ a special dispenser or pharmacist to put up his prescriptions or to prepare the drugs for use. Legislation now proposed would prohibit all such dispensing of medicine by physicians, except in remote country practice and in emergencies, etc. Naturally, this has raised a storm of protest. Such a measure has been a law, we believe, in France for some years, and it is reported not to work entirely satisfactorily; it is found that its advantages are not so many as its disadvantages. The druggist is apparently the principal gainer by the change. It is a truth that the art of prescribing is being to a certain extent lost, but, on the other hand, there are immense disadvantages in the prohibition of auto-dispensing. The ultimate result of such a law would probably be to send many patients to the prescribing druggist, and thus greatly increase the use of patent and advertised proprietary remedies.

THE COLD WINTER AND THE MORTALITY RATE.

Pneumonia, which is becoming the leading disease factor in the mortality of the present day, is a disorder that is very decidedly influenced by the external temperature and by the changes of temperature. The winter just closing, which has been almost a record one, and one which would show perhaps a greater amount of steady average cold than any other winter in the last twenty or thirty years if the month of November were included within the three winter months, has been a potent cause of much of the pneumonia mortality. According to a New York newspaper, the bacteriologic department of the Board of Health of New York City has investigated the subject of the contagion of pneumonia, and finds that contagion bears comparatively little importance to the spread of the disease. The board is inclined, therefore, to attribute the excessive death rate from pneumonia to the cold of the past winter. Of course, this is a factor additional to the influences, whatever they may be, which have been active in producing the greatly increased pneumonia mortality over the past ten or fifteen years. It is probable, therefore, without going into the field of prophecy, that the mortality, especially among the older and more feeble members of the community, during the coming spring months will be very much increased, largely through lung disorders, chiefly pneumonia. The reaction after a period of intense cold, such as has been the case, is likely to be a somewhat serious one, and many will succumb. The green winter is not always the one that makes the fat churchyard.

A SAFE FOURTH OF JULY.

The annual protest against the useless destruction of life and limb in the Fourth of July celebrations, instead of dying out last fall when deaths from tetanus ceased to occur, has been prolonged into a campaign. The startling statistics which we printed last August,[1] are still being referred to by the press; the matter is still being agitated in various parts of the country, and the indications are that there is more than a superficial interest in the saving of a good holiday from a bad usage. What might be substituted for the present noisy demonstration was the subject of a meeting of the Ravenswood (Chicago) Woman's Club recently. Segregation was suggested, a space being allotted to those who must burn powder, where, with a supply of physicians, they might celebrate in the old way, while other people celebrated in a quieter and more appropriate manner. Public meetings, speeches, picnics, music, and the instruction of children by their parents in the duties of citizenship—in other words, going back to the old and sensible method of celebration—was another suggestion. While there is not much in this program to entice a real boy from his firecrackers and revolver, the day might be so arranged, with games, picnics and various unusual occurrences, in which all the family, cousins, uncles and aunts join, as to leave no chance for him to miss firecrackers. The segregation idea is a good one. If the parents in a town or in a definite section of a city would agree to taboo fireworks—except in a certain described and limited locality—and to have a full day of celebration in other ways, the children would doubtless enjoy the day and have no regrets over the lost opportunity to burn powder and fingers.

TUBERCULOPHOBIA IN FRANCE.

Under a recent ruling of a commission appointed by the minister of the interior of France, consumptives in public hospitals must be kept isolated from the other patients. In January, the minister of the interior sent to the various local authorities circulars calling on them to give instruction to the hospital authorities to observe

1. THE JOURNAL A. M. A., Aug. 29, 1903.

this rule of isolation. According to this rule, there must be no direct or indirect relation or association between the tuberculous and non-tuberculous, and the attendants and physicians having the care of the tuberculous must abstain from having anything to do with other patients, or at least must change clothing and be disinfected when they are obliged to change from one service to another. The practical difficulties of carrying out this rule are shown in an editorial in the *Semaine Médicale*, February 10. It points out that the regulation is far more strict than those now observed in regard to diseases much more seriously contagious than tuberculosis, and that this is the first time that any such rigid rules have been adopted anywhere, at least under the direct sanction of the government. The frequency of tuberculosis and the manifold forms in which it appears, the variations of its severity and the fact that probably a very large proportion of the population is more or less affected, or has been, would seem to point to the absolute impossibility of such strict and efficient isolation as is here apparently attempted. It would seem that tuberculophobia has gone farther in France than elsewhere.

THE FICKER TYPHOID TEST.

The application of the Gruber-Widal reaction to the diagnosis of typhoid fever has done much to clear up obscure cases, especially in hospital practice. The technic of the test is not especially difficult to acquire, but the necessity of having constantly on hand fresh and virulent cultures of the typhoid bacillus makes it practically impossible for the general practitioner to use the reaction directly; if he avail himself of the advantages which the application of the Gruber-Widal reaction affords, he must either have a bacteriologist come to his patient, or he must send some of the patient's blood to a central laboratory where special cultures of the typhoid bacillus are kept ready for the purpose. Too often the cultures in such laboratories cease to be suitable for the test, or the blood is given to an assistant who does not take the necessary pains to ensure a reliable report; just where trustworthy information is most needed, it may be wanting. Last year Ficker[1] recommended the use of a fluid containing dead typhoid bacilli from cultures of known origin and virulence instead of the bouillon cultures of living bacilli, twenty-four hours old, ordinarily employed. He maintained that the serum from typhoid patients agglutinated the dead bacilli very definitely, and that the procedure had numerous advantages over the ordinary Gruber-Widal reaction. Clinicians were at first somewhat skeptical with regard to the value of Ficker's test, but in a number of hospitals it is being tried and the results thus far have been favorable. J. Meyer,[2] working under Hansemann's direction in Berlin, finds Ficker's test even more reliable than the Gruber-Widal reaction, probably on account of the greater constancy of the virulence of the bacilli used in the manufacture of Ficker's fluid. In two cases of typhoid, in which the ordinary Gruber-Widal reaction was doubtful, the Ficker test gave a positive result. The new method has the great advantage of convenience. The test can be made by any physician in his office as easily as one can examine a sample of urine for the presence of sugar. No thermostat is required, no living culture of typhoid bacilli, no complicated technic. All that one needs beside the Ficker's fluid is a bottle of salt solution, a cupping glass, a glass pipette and a few test tubes. Merck of Darmstadt has put the fluid, together with the apparatus, in convenient form on the market. The method will doubtless be applied in the near future by many clinicians. Should the reports be as favorable as those thus far made, a decided step forward in typhoid diagnosis will have been taken.

1. Berl. klin. Woch., 1903, 45; THE JOURNAL, Dec. 12, 1903, p. 1505.
2. Berl. klin. Woch., February, 1904.

TUBERCULOSIS AND PREGNANCY.

While it is the exception for tuberculosis to be transmitted directly from parent to child by heredity, a type of cell of lessened resistance and augmented susceptibility may be thus transmitted. In addition, the offspring of tuberculous parents is exposed to the danger of direct infection with tubercle bacilli expelled with the broken-down products of the morbid process. For these reasons the tuberculous patient should not marry, or if a married person be tuberculous procreation should be avoided, particularly in the case of women. Although it was at one time thought that pregnancy has no influence on the course of tuberculosis, or even has a beneficial influence, a better knowledge of the facts shows that it has really a most deleterious influence. From a study of this question, Dr. Wilhelm Hahn[1] expresses forcibly the opinion that pregnancy is a severe complication of tuberculosis, and the more so the more frequently it is repeated. He advises that in the conflict with tuberculosis as a disease of the masses, the question of preventing conception in tuberculous women should receive the most serious consideration. If pregnancy has occurred, the woman should be kept under constant medical observation. If aggravation of the tuberculous process take place, abortion may be induced with the consent of the woman and the sanction of a consultant. The life of the mother is to be considered as of more value than that of the child. In the later months of pregnancy, the induction of premature labor offers no advantage over delivery at term, and in the case of a tuberculous woman is a procedure of no small degree of gravity. As, moreover, a tuberculous woman may give birth to a healthy child, which, if placed under suitable environment, will have a favorable chance of living, it would be a mistake to sacrifice the life of the child needlessly. Since pregnancy of itself causes important changes in the human organism, a tuberculous pregnant woman should receive proportionately a greater amount of care. It is not likely, at the present time at least, that legal enactments looking to the application of any of the foregoing recommendations would be adopted or could be enforced, but these will subserve a useful educational purpose, and will receive the consideration of physicians and others interested in the welfare of the race.

1. Berliner klinische Wochenschrift, Dec. 28, 1903, p. 1194.

Medical News.

COLORADO.

Will Establish Antitoxin Stations.—Stations for the distribution of diphtheria antitoxin are to be established by the State Board of Health in Denver and Salida.

January Deaths.—During January 915 deaths were reported in the state, an annual death rate of 18.65 per 1,000. Of these 34 were due to typhoid fever, 31 to diphtheria and 10 to scarlet fever.

Communicable Diseases.—During January there were reported to the State Board of Health, 168 cases of diphtheria, 208 of scarlet fever, 87 of smallpox, and 525 of typhoid fever. Of the latter 444 occurred in Leadville.

Obstacles to the Enforcement of Law.—John T. Bass, an osteopath of Denver, who was arrested at the instance of the State Board of Medical Examiners, charged with practicing medicine without a license, and who sued the board for $10,000 damages for malicious prosecution, was given a verdict and awarded $700 damages. The defendants will ask for a new trial.

Cause of Typhoid Epidemic at Leadville.—The typhoid fever epidemic at Leadville developed between December 20 and January 10. The State Board of Health, in its monthly bulletin, analyzes the causes of this epidemic. The diagnosis was first confirmed by two autopsies. It was found that in the fall of 1903, two cases of typhoid fever—one imported—were treated at St. Vincent's Hospital. This hospital is on some of the highest ground in the city, and the drainage is toward the center of the city. The sewage, before emptying into the sewer in the street, runs through a settling tank, where heavy matter is allowed to settle, and the liquids pass off into the sewer. This tank is made of brick and mortar, not cemented inside or out, and, consequently, is not water proof. The theory of the board as to the epidemic is as follows: Stools, which were not disinfected from these first few typhoid fever cases in the hospital, reached the settling tank, and seepage occurred downward toward the street until the water main was reached. December 5 the main was drained in the vicinity of this hospital. As soon as the mains were drained, a vacuum occurred, and, consequently, the seepage flowed into any crack in the main with which it came into contact. When the water is in the main, the pressure is so much greater inside the pipe than out that seepage can not occur. But when the main was drained the pressure was reversed. In a town like Leadville, it is not an uncommon thing, owing to the mining that is going on in the town and its vicinity, for the water mains to become injured from the settling of the ground, resulting, of course, in more or less leakage. Therefore, it was an easy matter for contaminated sewage to come in contact with one of these leaks, and for the sewage to enter the main at the time it was drained.

ILLINOIS.

Dr. Hill's Anniversary.—On March 12, Dr. William Hill, Bloomington, became 75 years old. In honor of the anniversary the older members of the profession and their wives were entertained at dinner and many useful and beautiful gifts were presented to the venerable host.

Personal.—Dr. John T. McAnally, Carbondale, who is now in Mexico, will return and resume practice April 1.——Dr. Brown Pusey, Chicago, has gone to Europe for a protracted period of study.——Dr. Charles P. Caldwell, Chicago, was severely injured, March 7, in a cable-car collision.

Communicable Diseases.—Supposed chicken-pox at Pisgah has been shown to be smallpox. There are said to be about 25 cases in 8 or 10 families.——Diphtheria has caused the mayor of Gilman to issue a proclamation closing schools and prohibiting public gatherings.——Scarlet fever is still spreading in Taylorville.

Charges Unproved.—The charges circulated against the assistant physician of Peoria County, of alleged flagrant and consistent neglect of duty, have been disproved by the county physician, who says that the trouble has arisen through a service rendered by courtesy only, and in which the judgment of a visiting nurse had been given precedence over that of a physician.

Chicago.

New Hospital for Englewood.—Rev. Bernard P. Murray of St. Bernard's Church, Englewood, has almost completed his plans for a hospital at Sixty-third Street and Harvard Avenue, to cost $200,000.

Ehrlich Coming to Chicago.—Prof. Paul Ehrlich, director of the Royal Prussian Institute of Experimental Therapeutics at Frankfort-on-the-Main, Germany, will be the representative of German medicine at the coming convocation at the University of Chicago, at which he will deliver an address, and will receive the degree of LL.D.

Will Draft New Ordinance.—A committee consisting of Drs. D. A. K. Steele, L. Blake Baldwin, A. J. Ochsner, Julius H. Hoelscher and Malcolm L. Harris, representing the various hospitals of the city, is engaged in drafting a new city hospital ordinance. The old ordinance is said to be so defective that no hospital could operate under its provisions if they were enforced.

Rules for Inspection of School Children.—Dr. Henry Hartung of the board of education has formulated the following routine for the examination of school children:

Eyes.—Diseases of the conjunctiva and lachrymal apparatus, muscles of the eyeball, visual acuity, hypermetropia, myopia, astigmatism.

Ears.—External ear, auditory meatus, drum membrane, hearing, acute or chronic diseases of middle ear.

Mouth and Pharynx.—Defects of tongue, lips, palate, condition of teeth, hypertrophy of tonsils, pharyngitis, adenoids, granulations, etc.

Nose.—Acute or chronic rhinitis, nasal hypertrophies, polypus, deflection of septum, etc.

Chest.—Abnormal development, round shoulders, spinal deflection, diseases of the heart and lungs.

Skin.—Acute or chronic affections, scabies, pediculosis, favus, etc.

General Nutritional and Structural Disorders.—Anemia, chronic headaches, glandular enlargement, tuberculosis, deficiency of muscular development, nervousness, chorea, or any pathologic condition which may retard the pupil's growth or influence his progress in school work.

Erratic Mortality.—The total 549 deaths reported from all causes during the week ended March 12 are 76 fewer than those reported during the preceding week, and 82 fewer than those of the corresponding week of 1903. This, of itself, and for a single week, is not remarkable, although the annual rate, 14.75 per 1,000, is unusually low for March. One of the erratic features is the great reduction in the deaths of those over 60 years of age; the total 126 form only 23 per cent. of the total at all ages, while the average of such deaths for the previous nine weeks was 33 per cent. of the total. It might be explained that the previous rate had carried off an undue proportion of the aged; but the statement of mortality shows that chronic diseases such as consumption and cancer, whose victims are largely among the aged, caused 32 and 14 more deaths, respectively, than during the previous week. The marked and sudden increase of deaths from consumption—amounting to very nearly 40 per cent. more than the average of the previous nine weeks—coupled with a decrease of 23.5 per cent. in the deaths from pneumonia, forms another erratic feature. The 86 deaths from consumption are the greatest number ever reported in any single week, while the 127 pneumonia deaths are the fewest since the week of Dec. 26, 1903.

MARYLAND.

Personal.—Dr. J. Clement Clarke, Sykesville, has been re-elected superintendent of the Springfield Hospital for the Insane.

Want Money for Asylums.—The authorities of Springfield Hospital for the Insane ask for $100,000 for buildings and $40,000 a year for maintenance. Those of Cambridge Hospital ask for $10,000 for building and $6,000 a year.

Tuberculosis Bills.—Two bills prepared by the tuberculosis commission are before the legislature. One provides for registration of tuberculous patients throughout the state; the other aims to prevent the spread of tuberculosis by requiring apartments occupied by tuberculous patients to be disinfected, and gives power to the local boards of health to do this, making it a misdemeanor for the owner to rent to other tenants without proper disinfection.

An Active Profession.—A large delegation of physicians went to Annapolis, March 8, to urge the appropriation for the new library building of the Medical and Chirurgical Faculty, but, nothwithstanding, the legislature rejected the application. With the view of discouraging any further inroads on its time the committee, through Dr. Hill, brought into the house the following order:

Ordered that an additional room be assigned to the ways and means committee for the purpose of quarantining the letters received from the medical doctors of the state of Maryland in advocacy of a bill for the appropriation of $100,000 for a library building for the Medical and Chirurgical Faculty of Maryland, and that four stenographers and typewriters and six additional clerks be assigned to the committee, and that the postmaster be directed to deliver to the chairman of the committee $500 worth of stamps with which to answer the letters, and that a commission of attorneys

—of which Mr. George C. Morrison of Baltimore shall be chairman, at a salary of $5,000 per annum—be named by the speaker of this house to draw up the wills and settle the estates of all the members of the ways and means committee and take care of their widows and orphans, in the event of the failure of the legislature to appropriate the amount desired.

Baltimore.

Fire Alarm System in Hospital.—The Johns Hopkins Hospital has had installed a new fire-alarm system, with 13 stations and a volunteer fire department.

Personal.—Dr. St. Clair Spruill has gone to Jacksonville.——Dr. William S. Halsted will deliver the address at the next commencement of the Yale University Medical School.

Lung Disease Predominates.—While the death rate was lower 105 of the 282 deaths last week were due to affections of lungs and bronchial tubes. The rate per 1,000 for whites was 22.87; for colored, 48.29. Two cases of smallpox were reported, and there is still considerable prevalence of scarlet fever. The pneumonia deaths were 46 in number.

Bequests.—Mr. C. F. Mayer, ex-president of the B. and O. R. R., who died in Baltimore, February 24, made provision in his will for an ultimate handsome endowment fund for the Church Home and Infirmary, Baltimore.——Mr. Leopold Strouse, a Baltimore merchant, recently deceased, left $500 to the Hebrew Hospital and $2,000 to the Johns Hopkins University.

MASSACHUSETTS.

Composer's Bequests.—The will of William Francis Boott, the composer, devises $1,000 each to the Cambridge Hospital and to the Southbridge Hospital.

Made Residuary Legatee.—The Waltham City Hospital has been made the residuary legatee of the estate of Nathaniel A. Moody, which amounts to almost $28,000.

Illegal Practitioner Insane.—Ulric St. Pierre, New Bedford, who was recently fined $300 and sentenced to the house of correction, has been pronounced insane and committed to the Taunton Insane Hospital.

Fires in Hospitals.—Fire originating in an overheated furnace and appearing first in the operating room on Saturday, March 12, damaged the Melrose Hospital to the extent of $1,000. The patients were all removed safely, and are temporarily cared for in the Nurses' Home.——Fire in the Woburn Emergency Hospital, March 8, caused damage estimated at $1,000. The patients were removed in safety.

Personal.—Dr. Francis A. Bragg, Foxboro, has been nominated by the governor as medical examiner for the Sixth Norfolk district, vice Dr. J. C. Gallison, Franklin, deceased.——Dr. and Mrs. John R. Grouard, Nantucket, have sailed for Jamaica.——Dr. Forster H. Smith has been elected city physician of Lowell.——Dr. Marshall J. Mosher has been appointed physician to the Waltham Board of Health, and Drs. Edward F. Dowd, Charles A. Willis and Walter F. Adams, medical examiners of public schools.——Dr. Morton E. Cummings has been chosen as city physician of Malden, vice Dr. Richard H. Thompson.

To Avert Tetanus.—At a meeting of the Berkshire District Medical Society, February 26, the following preamble and resolution was passed:

WHEREAS, Four hundred and six deaths from tetanus were reported as occurring in the United States in July, 1903, as a result of the Fourth of July celebration, 363 of these deaths having been caused by toy pistols loaded with blank cartridges, and 17 by cannon crackers.

Resolved, That the Berkshire District Medical Society is in favor of any legislation and municipal ordinances which will effectively stop the sale and use of toy pistols, blank cartridges and cannon crackers.

Tufts College Announcements.—Tufts Medical School has increased its tuition fees from $125 to $150 a year. The following promotions and additions to the faculty are announced: Edward M. Plummer, M.D., professor of otology; Edward B. Lane, M.D., professor of mental diseases; Gardner W. Allen, M.D., assistant professor of genito-urinary surgery; Charles B. Painter, M.D., assistant professor of orthopedic surgery; John S. Ames, M.D., assistant professor of clinical medicine; Frank P. Williams, M.D., instructor in rectal diseases; Harry M. Germain, M.D., instructor in clinical surgery and assistant in anatomy; Luther G. Paul, M.D., instructor in clinical surgery; Scott McLeod, M.D., assistant in anatomy; Willis T. Middleton, M.D., assistant in anatomy; Frederick W. Stetson, M.D., assistant in clinical medicine; Arthur T. Legge, M.D., assistant in orthopedics; Leon E. White, M.D., assistant in otology; Walter E. Fernald, M.D., clinical lecturer on mental diseases; Charles M. Whitney, M.D., instructor in genito-urinary diseases, and William L. Ripley, M.D., instructor in physiology.

NEW YORK.

More Ratification.—Herkimer County Medical Society, at its annual meeting in Herkimer, March 8, passed a resolution endorsing the consolidation of the state medical society and association.

Schoolhouse for Hospital.—In Watertown, where it is said there are at least 500 cases of typhoid fever, the new high school building has been commandeered as a hospital by the board of health on the suggestion of the sanitary officer, Dr. George A. Soper, and is being used as a hospital, as the two local hospitals were overcrowded.

Insanity on the Increase.—The annual report of the state commissioner in lunacy says that 5,000 new cases developed during the year, 2,434 more than during the previous year. The total number of insane in all institutions was 25,934. There were 1,262 recoveries, a percentage of 24.72, as compared with 24.60 for the previous year.

Association to Consider Consolidation.—There will be a special meeting of the New York State Medical Association at the Academy of Medicine, New York City, March 21, to hear the report of the committee on conference of the New York State Medical Association, looking toward the union of that body and the Medical Society of the State of New York.

Personal.—Dr. Donald Ross, a member of the medical staff of the Willard State Hospital, has been appointed assistant physician to the Craig Colony for Epileptics at Sonyea.——Dr. John D. Malone, Newburgh, jumped from a trolley car while it was in motion, and sustained minor injuries. He sailed for Europe March 8.——Dr. Jesse S. Heiman won first place and Dr. Louis P. Gould second place in a competitive examination for house staff at St. Joseph's Hospital, Syracuse.

Infectious Pneumonia.—The increasing prevalence and death rate of pneumonia has been recognized by the State Health Department, which now announces that it will be given a separate column in the bulletin, instead of being grouped, as heretofore, with "acute respiratory diseases." The term "infectious" will include only the acute lobar pneumonia, and not catarrhal or broncho-pneumonia. The bulletin states that "while many prefixes to this name appear on our death returns, it is pretty safe to say that physicians generally understand the distinction as to the infectious disease we desire to specially record." The total number of deaths from pneumonia in the state during January was 1,510.

To Detect Defectives.—A state board of expert insanity experts, to be stationed at Ellis Island, to inspect immigrants as they land, with a view of detecting those in such stages of mental decline as would lead to their becoming public charges, is provided for in a bill introduced before the legislature in behalf of the State Commission in Lunacy. The total expense is estimated at not to exceed $25,000 per year, which would include one chief inspector at $5,000, two at $3,000, a male interpreter at $2,000, and a female interpreter at $1,500. The United States Marine Hospital has charge of this matter at present, but makes no provision for the employment of experts in insanity. The proposed bill is favored by Governor Odell and the lunacy commission.

Coroner's Bill Again.—Senator Elsberg has introduced his coroner's bill for greater New York, which failed to pass last year. The amended bill will allow the coroners now holding office to serve their full term, but the office will then be finally abolished. After January 1, 1905, the coroner's physicians will be transferred to a bureau of medical examiners in the department of health, in which department will be placed the jurisdiction of primarily investigating the causes of sudden and suspicious deaths in New York. From Jan. 1, 1905, to January, 1906, the latter being the expiration of the present coroner's term of office, the coroner's function will be limited to the holding of inquiries in like manner as city magistrates. After January, 1906, the coroner's office will be abolished and the medical functions will be entirely under the department of health, and the judicial functions in the hands of the city magistrates.

Buffalo.

Staff Elects Officers.—The medical staff of the Sisters of Charity Hospital elected officers as follows: President, Dr. James J. Mooney; vice-president, Dr. Charles S. Jewett, and secretary, Dr. Alfred E. Diehl.

Club Election.—The Physicians' Club, a private medical organization, has elected officers as follows: President, Dr. J. Henry Dowd; vice-president, Dr. Frederick M. Boyle, and secretary, Dr. W. K. Callahan. Resolutions were adopted recommending that an elementary course in hygiene especially per-

taining to the prevention of tuberculosis be taught in the public schools.

County Hospital Report.—The annual report of the Erie County Hospital shows a total average population of 362, at an average cost of $4.59 per capita. This cost is slightly increased over the 1902 report because of the increase in coal, advance in salaries and many permanent improvements which have been made. The admissions in the different departments were as follows: Medical department, males 1049, females 344; surgical department, males 741, females 144, and gynecological and obstetrical department 118.

Superintendent for Raybrook.—Dr. John H. Pryor of Buffalo has been appointed superintendent of the New York Hospital for Tuberculosis at Raybrook in the Adirondacks. Dr. Pryor, who was the originator of a state hospital for tuberculosis, was appointed one of the trustees. In order to compete in the examination he resigned as trustee, and received the highest mark. The position pays a salary of $3,500 and maintenance, and the superintendent is privileged to have consulting practice. The hospital will be open for the reception of 100 patients June 1. Local examiners to determine eligible cases for the hospital will soon be announced.

Visitors Commend State Hospital.—The report of the board of visitors of the Buffalo State Hospital to the State Commission in Lunacy, praises the management of the hospital, and states that the hospital is not as in former years, overcrowded, the present number of patients being 1,648, with a capacity for 1,631. It speaks of the intelligence of the attendants and that patients in dress and person are clean. There is a fire drill, which is also commended. The food is of the most excellent quality. The nurses' home has been enlarged, and now is occupied by 74. Plans for a home for the superintendent are now in his hands, with instructions for the contracts. It is urgent that a separate building be constructed for the consumptive insane.

New York City.

New Sisters' Hospital.—The Sisters of the Poor of St. Francis are erecting a hospital in the Bronx, which will accommodate 350 patients.

Healer Imprisoned.—Peter Barr, self-styled "divine healer," has been sentenced to thirty days' imprisonment for practicing medicine without a license.

Prolongs Regular Session.—Long Island College Hospital announces that, as it has prolonged its regular session until June, the summer session has been discontinued.

First Aid Service in Parks.—In all the northern parks, emergency hospital tents are to be established during the spring, where the injured on the football and baseball fields and on the golf links may obtain prompt medical and surgical aid.

Cottage for Consumptives.—A cottage to be used as temporary quarters for cases of incipient tuberculosis is being erected on the lawn at Bellevue Hospital. It will contain but twelve beds, and if a greater demand is made, more cottages will be built.

Brooklyn Personals.—Drs. Elias H. Bartley and William F. Campbell have been elected trustees of the Bushwick Hospital. ——Dr. Frank A. Jennings, house surgeon of St. Catherine's Hospital, in recognition of his work during the past 15 months as house surgeon of the institution, was given a banquet by the visiting and house staffs, February 29.

Thousands for Sick Poor.—By the will of Miss Sarah Schermerhorn, $200,000 has been given to charity. Of this the mission work of Grace Church among the sick and poor receives $78,000; the general and fresh-air work of the New York Protestant Episcopal City Missionary Society, $25,000; the New York Institution for the Blind, $5,000, and the Home for Consumptives, Denver, $50,000.

New York Academy of Medicine.—A book just issued shows that there are 878 fellows, 98 associate fellows, 46 honorary fellows and 32 benefactors. The library contains over 80,000 bound volumes, about 36,000 pamphlets, and subscribes regularly to more than 1,200 current periodicals, comprising nearly all the medical journals, transactions of medical societies, hospital and boards of health reports published throughout the world.

Physicians' Building.—We are informed that a building, to be devoted to physicians' offices exclusively, at Madison Avenue and 58th Street, will be opened May 1. The owners allow a committee of lessees to pass judgment on all others who make application for suites, and the committee is making such careful selection that the experiment seems already a success. It is intended that the building shall be something in the nature of a club, with society meetings and other social features to make it attractive.

Mt. Sinai Hospital Open.—This new $3,000,000 hospital, occupying an entire block, will open its doors to the public this week. It is said to be one of the most perfectly equipped hospitals in the world; every modern scientific appliance needed has been installed, and from the basement to the roof-garden everything has been designed to make the building cheerful and comfortable. The air in the hospital is even filtered. There is an utter absence of sharp corners, or angles, thus minimizing dust accumulation and making cleaning easy. The building will house 456 patients comfortably.

PENNSYLVANIA.

Philadelphia.

Voodoo Doctor Must Hang.—George P. Hossey, the negro voodoo doctor convicted June 26, 1903, of the murder of William G. Danze, was sentenced to death by Judge Martin in the Criminal Court. Unsuccessful efforts had been made to secure a new trial.

Spitzka in Philadelphia.—On March 15, Dr. Edward C. Spitzka, New York, addressed the students of Jefferson Medical College, on "The Brain and Skull of Man and the Anthropoids." After the address he was tendered a reception by the F. X. Dercum Neurological Society at the University Club.

Friends' Asylum Resists Taxation.—The Friends' Asylum for the Insane, at Frankford, filed a bill in equity against Abington Township in order to restrain it from collecting road tax on a farm of 104 acres situated in said township. The plaintiff contends that as the institution is purely charitable, its property is exempt from taxation.

Polyclinic Hospital.—During February, 1,554 new cases were treated in the dispensaries of the Polyclinic Hospital, and 5,765 visits were paid, making a total of 7,319 cases treated in the dispensaries during the month; in the receiving ward 529 cases were treated during the same period; 83 patients were admitted to the wards of the hospital, and 93 were discharged.

New Laboratories Open in June.—The new medical laboratories of the University of Pennsylvania are to be opened June 10. The first meeting of the general committee of arrangements, of which Dr. Horatio C. Wood is chairman, has been called for March 19. It is proposed to send out more than 16,000 invitations. The American Medical Association will close its session at Atlantic City on that day, and the members will be asked to attend.

Maragliano to Address the Profession in Philadelphia.—Under the auspices of the Henry Phipps Institute, arrangements have been made with Dr. C. Maragliano, professor in the University of Genoa, and a senator in the Italian parliament, to lecture in this city, March 28, on "The Serum Treatment for Tuberculosis." Dr. Maragliano will be entertained by Dr. Flick, head of the Phipps Institute, and by other physicians. Efforts will be made to have him give one or more clinics in the hospitals of the city during his stay. He will arrive March 20.

Health Report.—Typhoid fever is still epidemic throughout the city, although there has been a decided falling off in the number of cases reported during the past week. The health authorities look for a continuance of high aggregate of cases of typhoid on account of the bad condition of the drinking water. There were 140 new cases of fever reported during the week, as compared with 195 for the previous seven days. The deaths numbered 25, an increase of 6. Smallpox broke out afresh in the early part of the week, and 48 new cases are reported, an increase of 15 over the previous week. There are now 115 smallpox patients in the Municipal Hospital, and it is estimated there are about 100 additional patients who are treated at their homes. The deaths from all causes during the week numbered 709, being an increase of 81 over those of last week, and an increase of 32 over the corresponding week of last year.

Danger Signals to City School Teachers.—On March 9, Dr. H. Augustus Wilson addressed the teachers of the public schools on "School Life and Its Relation to the Deformities of Childhood." He exhibited lantern slides showing the most common forms of deformity, many of which, he said, were due to studying in improper positions and at improperly constructed desks. He pointed out how curvature of the spine was caused by persistent faulty position in standing, sitting, sleeping and carrying heavy weights, like school books, on one side. He said that the primary inducing cause may also be due to defective vision or hearing, causing the child to keep its head in one position.

He spoke of limp as the danger signal of hidden destruction, and said it should never be disregarded. He concluded by saying that whenever a child assumes persistently a faulty posture, whenever there is a limp, whenever there appears to be an increasing, languid, indolent, listless assumption of abnormal or faulty position the child should be kept under careful medical inspection.

TEXAS.

State Association Meeting.—The State Medical Association of Texas will hold its thirty-sixth annual meeting at the University, Austin, April 26 to 29 inclusive.

Hospital Dedicated.—The Lawrence Johnston Clayton Emergency Hospital established by the All Saints' Hospital Association at Fort Worth, was dedicated March 7.

Donates Site for College.—Dr. John O. McReynolds, Dallas, has donated to the Southwestern University Medical College a plat of ground on which a medical college building will be erected.

Banquet to Dr. Billings.—The El Paso County Medical Society listened to an address by Dr. Frank Billings, February 27, after which he was the guest of honor at a banquet given by the society.

Cuspidors in Cars.—The following rule, on March 31, will replace the previously existing clause in the disinfecting instructions of the state health officer, as applied to passenger coaches and sleeping cars:

Each passenger coach or sleeping car used for passengers must be provided with one cuspidor for each two double seats, or every four chairs. Each cuspidor must contain not less than six ounces of a disinfectant solution approved by this department. The cuspidors to be emptied, washed in similar solution and replenished each trip or every twenty-four hours.

VIRGINIA.

Dr. Taylor Has Pneumonia.—Dr. Hugh M. Taylor is seriously ill with pleuro-pneumonia at his home in Richmond. He is reported to be making satisfactory progress.

College Gets Appropriation.—The annual appropriation of $5,000 for the Medical College of Virginia, after bitter opposition, was passed by the house of delegates, March 2.

Mistrial in Unlicensed Practitioner's Case.—In the case of Mula Baksh, a "herb doctor," one of seven charged by the Norfolk Medical Association with practicing medicine without a license, the jury disagreed and was summarily discharged for the term.

Would Aid Consumptives.—The State Board of Health has forwarded to the legislature a report recommending the passage of a bill authorizing the governor to appoint a committee to consider the establishment of a sanitarium for consumptives, and to report to the next legislature. It is stated that there are 12,000 cases in the state.

County Health Report.—The report of vital statistics of Elizabeth City County, prepared by the secretary to the board of health, Dr. Walter Plecker, Hampton, shows a death-rate for 1903, of 10.5 per 1,000 for whites, and 22.02 for colored, or 16.20 per 1,000 of all deaths. Tuberculosis heads the list of death causes, closely followed by pneumonia and organic heart disease. During the year 66 cases of typhoid fever, 31 of diphtheria and 6 of scarlet fever were reported.

WASHINGTON.

Olympia Healthy.—The health officer of Olympia asserts that city is one of the most healthy in the United States. During 1903 only 45 deaths occurred, a death-rate of 6 per 1,000.

Personal.—Dr. S. B. Nelson, Pullman, has been elected president, and Dr. Elmer E. Heg, Seattle, re-elected secretary of the State Board of Health.——Dr. John B. Longhary has been chosen president of the Seattle Board of Health.

Organization Stamps Out Smallpox.—The annual report of the State Board of Health shows the benefits of organized effort in stamping out smallpox. In April there were 202 cases of smallpox in the state; in May, 70; in June, 115; in July, 56; in August, 34; in September, 44; in October, 42; in November 28, and in December, 29.

More Room Needed for Insane.—The State Board of Control, after its February inspection, is said to have found that several of the state institutions are overcrowded, and will probably recommend an appropriation to cover the cost of additions to the state hospitals at Stellacoom, Walla Walla and Medical Lake. The state has now 2,500 insane in its care, and the number is increasing rapidly.

WISCONSIN.

Must Take Rest.—On advice of his physician, Dr. William H. Earles, Milwaukee, will go to Southern California to regain his health, which has been impaired by overwork.

State Board Moves.—On and after April 1, the office of the secretary of the State Board of Health will be in Madison, and all communications intended for the board should be addressed to Dr. Cornelius A. Harper, secretary, Madison, Wis.

County Asylum Burned.—Racine County Insane Asylum at Gatliff was burned to the ground, February 22. All the patients, numbering 133, were brought out in safety and taken to Racine. The loss is $115,000, half of which is covered by insurance.

A Good Law if Enforced.—The Milwaukee City Council, on March 7, passed an ordinance prohibiting spitting on the floors of public buildings, sidewalks and public vehicles, and providing a fine of $5, or ten days' imprisonment for conviction of violation of the ordinance.

Dr. Wingate Resumes Practice.— Dr. U. O. B. Wingate, Milwaukee, who for ten years has filled most admirably and ably the position of secretary of the State Board of Health, announces that on his retirement from that position, April 1, he will devote his time and attention entirely to medical practice.

GENERAL.

Indians Have Smallpox.—The Indians in the Northwest of Canada are suffering from an epidemic of smallpox.

First Aid in Pennsylvania Railway.—Plans have been approved by officials of the Pennsylvania Railway to place medical outfits, with stretchers, in stations and on trains, to be of service in case of accidents. First aid instruction will be given the employes.

Famous Foreigners at Atlantic City Session.—Dr. A. Lorenz has announced his intention of being present at the next session of the American Medical Association at Atlantic City, June 7 to 10. He will come to Philadelphia as the guest of Dr. H Augustus Wilson about May 25. At the commencement exercises of the Jefferson Medical College, May 27, he will have conferred on him the honorary degree of LL.D. Dr. Albert J. Hoffa, professor in the University of Berlin, and Dr. Lorenz will hold an orthopedic clinic at the college, Monday morning, June 6, from 9:30 to 12:30. Arrangements are under way by which perhaps other eminent men from across the water will be present.

FOREIGN.

Cancer Research in Greece.—Question blanks were distributed to the physicians throughout Greece, and every one of the blanks was filled out and returned. The total 56 physicians had only 7 cases of cancer to report in a population of 66,000. The stomach, uterus, tongue and breast were the organs affected.

Radiology.—We notice that the *Riforma Medica*—which attempts to classify its abstracts—has now one department devoted to "Radiology." Works on radioactive substances and phototherapy in general are included under this title, which has supplanted the former heading of "Sensational Medicine." The sensation of yesterday is the work-field of to-day.

Vienna Anglo-Americans Organize.—To further the interests of American physicians studying in Vienna, the Anglo-American Medical Association was organized, February 22, with a membership of 68. The following officers were elected: Dr. Amond Ravold, St. Louis, president; Dr. Ralph P. Daniells, Chicago, vice-president, and Dr. F. G. Harris, Chicago, secretary and treasurer.

Another Appeal for Brevity.—This time it is the dignified *Deutsches Archiv f. klinische Medicin* which states that it has tried to keep pace with the constantly accumulating material by issuing its numbers at shorter intervals. This increases the cost to both publishers and subscribers, while long articles drag through several numbers, and readers lose their interest. From every point of view, therefore, it is advisable to reduce the amount of material. The editors beseech all intending to contribute to its columns to condense their articles as much as possible. They hint that the length of an article is liable to be in inverse proportion to the age and experience of the writer.

Battle of the Clubs in Germany.—The demands of the medical officers of the sickness insurance societies for increased remuneration now that their term of service has been doubled by recent legislation, have been unexpectedly re-enforced on the floor of the Prussian house of deputies by the minister of the

interior department, who censured the lawmakers for ignoring the medical officers of the societies in this legislation. The organized stand taken by the profession in the matter has led to contention between the medical and the financial officers of the societies, and these words of a member of the Prussian cabinet are regarded as an indication that the government will sustain the profession in their moderate demands.

Sweden to Have a Medical Weekly.—Dr. K. Kjellberg of Stockholm has commenced the publication of a weekly medical journal, to be the official organ for the General Swedish Medical Association. The title is *Almänna Svenska Läkartidningen.* The first two numbers have been received and contain instructive articles on "Arrhenius and the Doctrine of Immunity" —a subject discussed editorially in these columns, page 651— and others on Finsen treatment of lupus, paraffin prothesis, etc. The list of collaborators on the journal includes Profs. E. Almqvist, J. Borelius, H. Köster and seventeen others. The journal *Eira* was previously the organ of this association, but it suspended publication on the death of its editor, Dr. Simon, last June.

The Age Limit for Professors in the French Universities.—"Few die and none resign" seems to apply to university professors as well as elsewhere. A Paris exchange gives a list of 17 professors who served until they died at 83, 86 or even at 92, all over 71. Eight professors resigned at the age of 72 to 82. These, with other data which it presents show that the imposition of an age limit was a wise measure. The limit was at first 70 and was then reduced to 55 and 60. The students' mode of protesting against the recent abolition of the age limit is not parliamentary, but as the *Gaz. Méd. de Paris* remarks, "it takes a small revolution to accomplish anything at Paris." The rioting has gradually subsided after a week or two of interference with the lectures. The students have organized and presented a petition to the authorities begging to have the age limit of 70 years restored.

Fifteenth International Medical Congress, Lisbon, 1906.—The first article of the official regulations for this congress establishes the date as April 19 to 26, 1906. The second article refers to membership, which is limited: 1, to physicians applying, and 2, to scientists, who shall be presented by the Portuguese executive committee or by the national committees of other lands. French is to be the official language for international relations, the committees setting aside their own language, the Portuguese, completely. In the general assemblies and section meetings English, French and German may be employed, and in the section meetings other languages may be used, provided the communication is followed at once by the same translated by some member into one of the languages permitted. All communications destined for the congress should be sent to the secretary general, Professor Miguel Bombarda, Lisbon, before Jan. 1, 1906. They should be accompanied by a summary, which will be published and distributed to the members of the corresponding section by the congress authorities. Communications may be sent in later, but will then have to await their turn after those already on the order of the day have been disposed of. The subscription fee is $5, which can be paid to the treasurer, Prof. Alfredo Lopes of Lisbon, or to the national committee in each country.

Professor D'Antona's Acquittal.—Professor D'Antona of Naples is one of the leading surgeons of Italy and one of the most respected and beloved. He was made the defendant in a sensational suit under the following circumstances: He performed an exploratory laparotomy on a patient in the last stages of a liver affection. The conditions were found inoperable, as the family had been warned might be the case, and the abdomen was closed, leaving two hemostatic forceps and gauze tampons. The following day he removed the forceps and some of the gauze strips, and then, as usual, left the further care of the case to the surgical personnel of the Pace Hospital. The gauze tampons were renewed several times, and the family, profiting by the temporary improvement in the condition after the laparotomy, removed the patient from Naples to Campobasso, where he died three days after his arrival. The necropsy revealed an ascitic-purulent accumulation at the inner end of the gauze. The family instituted criminal proceedings against Professor D'Antona, accusing him of "homicide from imprudence." The committee of six medical experts testifying in the case included Foa, Bassini and Novara, and their report was to the effect that the condition of the patient was so precarious that the leaving of the gauze in the abdomen was most certainly not the cause of the fatal termination, and that it was very doubtful whether it had hastened it. The case was appealed from court to court, but the supreme court has finally fully exonerated Professor D'Antona, who received an ovation from his friends and students when he returned to Naples, February 15. The final trial was before the senate of the realm, which resolved itself into the supreme tribunal for the purpose, as Professor D'Antona is a senator. Seventy witnesses were examined.

Anti-quack Legislation in Baden.—The various states of Germany leave much to the discretion of the local authorities in the matter of repressing quackery. Baden has now taken the lead in more drastic measures, and the Landtag is now considering a bill, endorsed by the government, which provides for a fine of $40 or imprisonment for charlatans whose practices conflict with the interests of public health or morality or with the decrees issued to protect the populace against swindling. The same penalty is imposed for publicly announcing or advertising misleading notices in regard to competency, special training or successes or making exaggerated promises or proposing to treat patients without a personal examination (absent treatment). The same penalty is imposed likewise for announcing or advertising drugs whose free sale is prohibited or means for preventing conception. These regulations do not apply to announcements in the medical press. Dr. Julian Marcuse of Mannheim writes to the *Berliner klinische Wochenschrift* that the new bill realizes several of the wishes of the profession, which the authorities have always declared impracticable. The bill makes the editors of journals also responsible for publishing extravagant ads, and it puts an end to the distributing of circulars, pamphlets, etc., by quacks. The market-crier style of advertising is forbidden both for quacks and for registered physicians. Marcuse finds nothing to criticise in the entire bill except the reference to means to prevent conception, which he thinks had better be omitted. In all other respects the bill is a model which he hopes will find imitation elsewhere. Its passage in the Landtag seems to be assured. It is pointed out that when it is legally forbidden to advertise in true charlatan style and distant treatment is also forbidden under penalty, the circles in the populace who pin their faith to what they read in print—and these circles are larger than is generally recognized—will be protected against injury to health and life as well as pocket.

DUBLIN LETTER.

Amalgamation of Hospitals.

An interesting event took place here lately in the completion of the scheme for the amalgamation of the ophthalmic hospitals. For the past twenty years it has been proposed that St. Mark's Ophthalmic Hospital and the National Eye and Ear Hospital should join their resources to form one large and efficient institution. After much opposition the outlines of the arrangement were agreed to, and in 1896 a great bazaar was held to provide funds to build an entirely new hospital. Since then, though still working as separate branches, the two old hospitals have had their management in common, but within the last few weeks the new building has been finished, and the patients have been transferred to it. The result will be that more work can be done in better surroundings, with much greater economy. It is a pity that some of the other Dublin hospitals do not follow the example set them by the ophthalmic hospitals, a course recommended twenty years ago by a viceregal commission; for a more wasteful system than the present one can not devise. In a city of about quarter of a million inhabitants there are no less than ten general clinical hospitals. The largest of these contains about three hundred and fifty beds, but most of them have only a hundred or less. Each of them is overstaffed, but as the medical attendants are none of them paid, this may not be a disadvantage. Indeed, as long as good men are to be had, and the medical profession of Dublin stands very high, it is no harm to keep many men attached to a hospital. But the expenses of management are enormously increased by the multiplicity of institutions, and students are unable to see a great variety of cases. It must be remembered, however, that none of the hospitals possesses medical schools, the schools being separate educational institutions. Outside pressure has frequently been brought to bear on the hospital authorities to persuade them to amalgamate some of the smaller institutions, but conservatism and vested interests have kept the day.

Royal Academy of Medicine.

The Royal Academy of Medicine has just published its proceedings for 1903—a volume which is supposed to represent the scientific work of the profession in Ireland. Though it contains many interesting contributions on clinical cases, on the whole it is a disappointing collection. Each physician is content to furnish a description of his case, but the whole volume does

not contain what can be called a complete article. The references to literature are most meager, and the whole tone is lamentably insular. Things have sadly changed since the days when Dublin physicians—Graves, Stokes, and their contemporaries—wrote in such a way as to make the Dublin school famous throughout the world, not only for clinical acumen, but for broad scholarship and classical style of literary composition. Nowadays we look to your side of the seas for medical men who can write sound and clear English, and we take our models in Wendell Holmes, Weir Mitchell and Osler.

Pollution of Shellfish by Sewage.

A valuable research into the conditions of the oyster-beds and other shellfish layings on the Irish coast has just been made by the officers of the local government board. The object of the inquiry was to discover to what degree the various layings were liable to sewage contamination, and two series of investigations were made. An inspector, Dr. Brown, made a topical examination of the various localities, and noted the nearest points of sewage outfall, and of discharge of surface drainage. His opinions constitute one part of the report, while the second part consists of the investigations of the board's bacteriologist, Dr. McWeeney, into the condition of shellfish sent him from each bed by the inspector. Each gentleman formed his conclusions independently of the other, and a comparison of the two reports is consequently very interesting. The bacteriologist takes as his standard of purity the absence of *B. coli* and *B. enteritidis sporogenes*, although recognizing that the habitat of these germs in nature is still doubtful. The test is in all probability somewhat rigorous, and should not be considered final for practical purposes, unless borne out by local examination. In every case in which the inspector believed contamination either probable or possible, Dr. McWeeney found evidence of fecal pollution, although in some the number of organisms present was very small. The result as a whole shows that at the present time the majority of Irish beds are in an unsanitary condition, some of them, as, for instance, all those in Dublin Bay, being positively bathed in sewage. On the other hand, there are many beds, particularly on the west coast, absolutely free from all possibility of contamination, and as there is unlimited expanse of pure seaboard still available the industry should not eventually suffer.

LONDON LETTER.

Striking Success of the Anti-Malarial Expedition to Ismailia.

Sir Alfred Jones, the munificent patron of the Liverpool School of Tropical Medicine, entertained a company of merchants and scientists to meet Professor Boyce on his return from Egypt and to receive his report on the anti-malarial expedition to Ismailia. The results are striking. When Major Ross visited Ismailia in September, 1902, there were 2,000 cases of malaria annually in a population of 9,000, of whom 2,000 were Europeans. The authorities carried out Major Ross' suggestions as to filling up marsh land and clearing out small irrigating channels and stagnant waters, at an expense of $22,000. They organized a drains brigade and a petroleum brigade. As a result people can now sleep in any of the European quarters without mosquito nets. The annual number of cases of malaria was reduced to 200. No fresh cases occurred, and there were no deaths in the year among Europeans, and only four among natives, against 30 deaths the year before. So great was the improvement that Prince d'Arenberg, president of the Suez Canal Company, hoped before two years to see Ismailia regarded as a sanatorium and watering-place for Cairo. Tropical medicine is showing that we have been for centuries cultivating medicine applicable to our own country and domestic life and neglecting our great empire all over the world. The time has come when medicine applicable to the whole world must be taught. Major Ross said that the success of the anti-malarial campaign at Ismailia had taught two things—that a large town could be entirely rid of mosquitoes and that it was equally possible to eradicate malaria. He has been asked by the government to draw up a report on malaria in India, where among the troops and the gaol prisoners 300,000 cases are admitted to hospital per annum. With the results obtained in Ismailia before him he is confident that this immense admission rate can be reduced to one-third.

Ambidexterity.

A society for the promotion of ambidexterity has been formed under the name of "The Ambidextral Culture Society." The list of members contains some prominent names in medicine, and among the laity, such as Mr. Noble Smith, the orthopedic surgeon, Sir James Sawyer, Lady Florence Dixie, and the professors of natural history at the universities of Edinburgh and St. Andrews. Among the subjects on the syllabus for discussion are "Ambidexterity in the Infant School," "Physiology of Simultaneous Ambidextral Work," "Ambidexterity in Angling," and "Ambidexterity from the Medical Point of View."

The Cambridge Diploma in Tropical Medicine.

The great advances recently made in tropical medicine, as previously stated in THE JOURNAL, have led to the establishment of a diploma in that subject by the University of Cambridge. In Germany and France military, naval and colonial physicians are required to attend courses in tropical medicine before taking up their duties. There are indications that similar regulations will soon be applied to physicians desiring to enter the British service abroad or to engage in medical missionary work. In a recent colonial office circular it is proposed that colonial government physicians shall pass an examination to obtain a certificate of efficiency in tropical medicine. The government has encouraged Cambridge University to institute a test in the knowledge of tropical diseases. The examination will be held once a year. As evidence of study and attainments candidates may present records of work done in tropical medicine and any diploma of public health or sanitary science. Such evidence will be considered as a qualification for admission to the examination, and will also count in the examination. The examination will comprise: 1. Methods of pathologic and bacteriologic investigation, examination of the blood. The characters, diagnosis and life history of animal and vegetable parasites. The examination, chemical and microscopic, of poisonous or contaminated foods and waters. 2. The origin, pathology, propagation, distribution, prevention, symptoms, diagnosis and treatment of the epidemic, endemic and other diseases of tropical climates, including malarial fever, blackwater fever, trypanosomiasis, relapsing fever, dengue, yellow fever, plague, tetanus, beri-beri, dysentery and hepatic abscess, cholera, enteric fever, Malta fever, specific diarrheal affections of the tropics, disease due to cestodes and other worms, filariasis, bilharzial disease, specific boils, sores and other cutaneous affections, mycetoma, ophthalmic affections of the tropics, affections caused by poisonous plants and animals and by poisoned weapons, and sunstroke. 3. The general effects on health in the tropics of seasons and climate, soil, water and food. Personal hygiene, acclimatization. Principles of general hygiene, with special reference to food and water supplies, sites, dwellings, drainage, and the disposal of refuse. The sanitation of native quarters, camps, plantations, factories, hospitals, and asylums, gaols, pilgrim and coolie ships. Principles and methods of disinfection. Each candidate must pay a fee of $35 before admission or readmission to examination.

Benzine in Coal Gas.

In a paper read at the Royal Society Dr. R. Staehelin stated that when frogs are exposed to coal gas motor phenomena are produced which are absent if the gas is previously purified by passage through oil and that these phenomena can be reproduced if the purified gas is made to take up benzine vapor. The investigation had its origin in a paper by Vahlen, who maintained that coal gas and carbon monoxid differed in poisonous action and that the former produced in frogs excitatory phenomena which were absent in animals exposed to the latter. In warm-blooded animals this difference was not observed. Benzine administered to rabbits and guinea-pigs by inhalation appears to produce no effect. This tends to show that in man benzine plays no part in coal-gas poisoning. However, benzine vapor is described by Mr. Wynter Blyth, the toxicologist, as producing tinnitus, convulsive trembling, twitching of the muscles and dyspnea.

Correspondence.

The Patenting of Surgical Instruments.

DENVER, COLO., March 11, 1904.

To the Editor:—At the present time medical ethics prevent the best men in medicine from patenting various appurtenances which their brains, experience and philanthropy may have caused them to bring into existence. Such a generous stand is evidently taken in order that humanity in general, and the medical profession in particuar, may be benefited thereby; in fact, the motives are too obvious to require discussion. In other words, a man of medical genius is supposed to give freely of the fruits of his labor, and suffering mankind is supposed to be the recipient. Why, then, is it that physi-

cians are shortsighted, careless and improvident as to overlook the fact that their gifts never reach those for whom they were intended?

The above may seem a broad statement, but it is nevertheless true, and should be given consideration. For instance, take any of the various instruments that have been introduced into surgery in the last few years and let us run over approximately their usual history. The inventor, usually a man of experience and brains, after much thought and trouble evolves in his mind a method whereby some pathologic condition may be rendered more amenable to treatment. To carry out his idea he designs a new instrument and consults some local instrument maker, in order to test his theory. After a trial or two, and probably considerable expense, the instrument maker accomplishes his object, and the instrument is produced according to the author's idea.

Then, after a few months' use, the inventor finds his object accomplished, and next negotiates with the manufacturer. The mercantile gentleman just alluded to at once procures a patent, and straightway raises the price to any figure that may suit him; and what is the result? Where is the public? How about a brother practitioner? Where is the philanthropy? And what is the outcome of this benevolent and misguided ruling of medical ethics? Simply this: The price of the article is just as high as if the inventor had procured the patent and received the profits himself.

Better no ethics at all than the present methods, since then, at least, the man who deserves the credit—the inventor—would be benefited.

I do not pretend to be a reformer, but I would rather respect established customs when possible, yet the question here arises: Can not these matters be rendered more consistent?

Would it not be better to have these articles patented by medical men, and thus control the market? Or, if ethics would not trust the inventor thus far, would it not be better to establish a national committee to hold such patents and look after the production of such instruments, maintaining the standard of quality and holding the prices down to a reasonable figure? The organization could probably be made self-sustaining by the exaction of small royalties, and prosecutions of infringements carried on by funds thus derived.

More difficult matters than these have been overcome and regulated; why not, then, these also?

M. E. PRESTON.

Hospital Experience Necessary for Licensure.

LORING, LA., March 10, 1904.

To the Editor:—In THE JOURNAL, March 5, Dr. Lawrence Holmes of Asheville, N. C., advocates the rejection, by statutory law, of all candidates for licensure who have not had one year of interneship in a good hospital. No one will deny that a year in a good hospital would be of incalculable value to the prospective physician; but there are various reasons why this is not practicable. Internes must generally bear their own expenses, as no compensation is provided. None but the wealthy, or sons of the wealthy, could avail themselves of this privilege under these conditions. This would make of the medical profession a privileged class, much as the officers of the English army, whose incompetence some say is notorious.

I think that the statement that "internes are composed of the best class of students" is not true.

The hospital-trained student would not be so practical a man for the rural district, other things being equal, as the one not so trained. The country physician, miles from assistance, in the cabin or shack, comes face to face with situations and emergencies which he must handle alone, and which your hospital interne, with his ideas of trained nurses, assistants, etc., could never pass through successfully.

Your correspondent cites the case of the young man who was ignorant regarding syringomyelia, and yet this ignorant young man was allowed to practice on an innocent and unsuspecting public. Now, with all due respect to Dr. Holmes, I would like to ask if he ever diagnosed, absolutely and positively, a case of syringomyelia, except on the postmortem table.

In "Diseases of the Nervous System," by Hirt, on page 471, is the following: "The practical significance of these (postmortem) abnormalities is not great, as, for one thing, the signs during life are so uncertain and changeable that a correct diagnosis has almost to be regarded as accidental; and secondly, because the disease, even if recognized, is not at all accessible to any treatment." Does that look as if the man who was ignorant of syringomyelia was so grossly incompetent, when the expert acknowledges that he can not recognize the disease and can not treat it, if by accident he happens to make a correct diagnosis?

By all means, let us have a uniform and reasonable standard of qualifications for entrance to the medical profession. But, in my opinion, it only hinders reform to make ridiculous proposals.

F. C. BENNETT, M.D.

Eyestrain as a Cause of Headache and Other Nervous Symptoms—A Question of Precedence.

PHILADELPHIA, March 12, 1904.

To the Editor:—Concerning the courteous note of Dr. A. L. Ranney, under the above heading in THE JOURNAL March 12, kindly permit me a few words of reply. I am conversant with the literature to which Dr. Ranney points, and it has always given me pleasure to emphasize the discoveries in medical science made by Americans.

To Dr. Stevens and to Dr. Ranney credit is due for the first, continuous and indefatigable advocacy of the rôle of heterophoria in causing eyestrain and its reflexes. But my contention is a very different one. I believe that heterophoria has no influence or but little in causing eyestrain or the reflex ocular neuroses under discussion. In my writings, I have persistently advocated the view that tenotomy is not only unnecessary, but is really a prevention of cure. To me heterophoria is one of the results of eyestrain, and what success I have had in stopping the eyestrain reflexes and results of eyestrain has been gained without a single tenotomy. Moreover, I feel convinced that this error in the treatment of heterophoria by tenotomy in directing attention to an effect instead of to the cause of eyestrain, has had the most pernicious of consequences. In the minds of the large majority of the American medical profession tenotomy has proved to be without curative effect on the systemic reflexes of eyestrain, and in the disappointment at the failure and continued overemphasis of this theory, the true theory of the cause in ametropia and of the real cure by scientific lenses, has been overwhelmed in undeserved, indiscriminate and unscientific opprobrium. I could demonstrate this by any number of quotations from reviews, editorials, etc., from medical journals. In my sketch of "The History of Migraine," etc., I was interested only in what I think the line of progress—the main or trunk line—and not in an unused switch which runs to a deserted mining camp. The article of Martin, to which I alluded, contended that migraine was due to astigmatism, heterophoria not being mentioned. Martin's article was the first clear statement with which I am acquainted of the truth that migraine is due to ametropia. Personally I do not altogether agree with Martin as to some details, but I think his contribution is an epoch-making one, and in the line of definite and continuous progress.

GEO. M. GOULD.

Membership in the Approaching International Medical Congress.

[Translation.]

LISBON, Feb. 24, 1904.

To the Editor:—In No. 5 of THE JOURNAL (Jan. 30, 1904), I read under the heading "Admission to International Congresses" a notice to the effect that the national committee for Great Britain had adopted a resolution that the membership of international medical congresses shall in future be limited to physicians, and that this resolution was forwarded to the executive committee of the approaching International Medical Congress at Lisbon.

Allow me to inform you that no resolution of this kind has been received by the executive committee of the congress, and that the Article 2 of the Regulations, which restricts to physicians alone admittance as members to the congress, was drawn up by the executive committee last June, and was unanimously adopted by the committee of organization and publicity at its meeting in October, 1903.

It is, therefore, exclusively to these committees that the honor (if honor it be) is due of having restored to the international medical congresses the exclusively medical character which they had always maintained until the Madrid Congress.

I may be permitted to add that the president of the national committee for Great Britain received a copy of the regulations of the congress in December, 1903, and formally congratulated the executive committee on the form given to the article in question.

I shall be much obliged if in an early number of THE JOURNAL you will correct in accordance with the facts the notice to which this explanation refers.

MIGUEL BOMBARDA, Secretary General.
Hôpital de Rilhafolles.

[The committees of the congress are to be congratulated on taking this wise action, before they received any official request so to do.—ED.]

A Study of a Case of Green Urine.

JACKSON, LA., March 8, 1904.

To the Editor:—Apropos of the article of Dr. Cooper with the above title, in THE JOURNAL March 5, page 638, is the following case: While an interne of the Charity Hospital, New Orleans, during 1901, I was called about 2 o'clock one morning to a patient suffering from urinary retention. I found a young negro man with a greatly distended bladder. He was easily catheterized, and an unusually large quantity of urine of a beautiful light-green color was withdrawn. He informed me that he had been taking some pills which he had purchased at a nearby drug store, and which had been recommended to him by the druggist for the cure of "lost manhood." He showed me several of the pills, together with the vial containing them. They were coated with some white substance, and the essential substance was in appearance not unlike methylene blue. The directions were one three times daily. Apparently they were prepared by the local druggist. The druggist had told the man to watch the color of the urine for evidence of the proper effect of the medicine. The patient had been passing green urine for several days before retention took place, and up to that time he was very much elated over what the pills were doing for him. There was no appreciable stricture, nor had he suffered from retention before, according to his statement. It occurred to me at the time that the drug ingested, either through the medium of the urine or by its systemic effects, had caused the retention. There were no other apparent effects, except the psychic, before the man learned better. Unfortunately neither the urine nor pills were carefully examined.

E. M. HUMMEL, M.D.

The Circulating Medical Article.

CHICAGO, March 14, 1904.

To the Editor:—Apropos of your editorial on "The Circulating Medical Article" (THE JOURNAL, March 12, 1904, p. 716), the following letter from Professor Finsen is of interest. It is in reply to a letter from me calling attention to the way in which his name and the reputation of his institute are being misused in this country:

KOPENHAGEN, Feb. 2, 1904.

Professor Dr. Wm. Allen Pusey.

Dear Sir:—Thanking you for your letter, I can not but highly regret the abuse which is made of my name. I have not the least to do with the matter, which you speak of in your letter, and there are nowhere "branches" of the Finsen Light Institute, consequently in America neither.

On the other hand, I am hospitable to all physicians, ... but as you understand it is impossible to me to control the people and to know whether they are going to abuse my name later on or not.

My name is also highly abused here in Europe, but I have been obliged quite to give up to take the matter into my hands, as it would cost too much time and pain, and yet be of very little use.

With my best thanks, Yours faithfully, NIELS R. FINSEN.

It must take a good many Christian virtues to be a scientist like Finsen, and to not be a misanthrope.

W. A. PUSEY.

A Disclaimer.

RICHMOND, VA., March 14, 1904.

To the Editor:—It has just come to our notice that one J. Sills Daniels, M.D., of this city, the proprietor of a so-called cancer-cure sanitarium, and sanitarium for the treatment of diseases of women, especially obstetric cases, an asylum for the unfortunate, etc., who also offers a diploma as a member of the hospital staff for a consideration to any physician desiring it, has without our knowledge or authority, announced us as consulting physicians of the said sanitarium. We desire to stamp such a statement as a piece of unwarranted impertinence, and absolutely without any foundation in truth.

Signed: J. N. UPSHUR, M.D.,
JACOB MICHAUX, M.D.
LANDON B. EDWARDS, M.D.,
RAMON D. GARCIN, M.D.,
B. L. TALIAFERRO, M.D.

Queries and Minor Notes.

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish his name will be faithfully observed.

CHARGES FOR SERVICES TO PHYSICIANS AND THEIR FAMILIES.

DENVER, March 10, 1904.

To the Editor:—In THE JOURNAL, March 5, there appears a communication from Dr. B. P. Anderson of Colorado Springs, relative to a bill rendered him for professional services to his daughter by a physician residing in New York City. From the evidence presented it would appear that our New York friend is engaged in "small business," under the circumstances in which the bill was presented to Dr. Anderson. Dr. Anderson, however, in alluding to the incident, deals with this misguided physician in a most lenient and gentlemanly manner, as he fails to either mention his name or give his address. As a matter of reference to other members of the profession I would suggest that the name and address of this man be published in the columns of THE JOURNAL. The medical profession is filled with men of big hearts, men who stand true to the ideals of the framers of the Principles of Ethics, men who cheerfully respond day or night to the calls of their colleagues and their families with never a thought of remuneration. The conduct of this physician who attended a member of Dr. Anderson's family must be condemned by all decent men in the profession.

CLARENCE L. WHEATON, M.D.
632 Seventeenth St.

NEW YORK CITY, March 8, 1904.

To the Editor:—Under the above caption Dr. B. P. Anderson asks for information and quotes an instance in THE JOURNAL, March 5, 1904. The question is one to which some of us have to give pretty serious consideration, and perhaps it would be well to have the question discussed with reference to personal experience, as the matter is one that can not be covered in all of its features by the Principles of Ethics. There are no doubt some consultants whose entire time could be devoted to physicians and their families. Personally, I find that, averaging by the year, one-tenth of my work is for physicians. When I am so busy that it becomes necessary to charge physicians for operative work or for consultation I shall have so much money that it will not be necessary to charge physicians for operative work or for consultation. There is, however, a side feature requiring consideration, and that is time loss for out-of-town work. This means a direct and immediate loss of money, and it has been necessary to make the same charge to physicians that would be made to laymen for time. I do not want pay for work, and, in fact, feel uncomfortable if a physician feels that he ought to make me a present. Most of us, I am sure, consider it a privilege and a pleasure to help out a colleague who is in trouble. On the other hand, in choosing a physician for my own family it was stipulated that he should charge full fees for visits, on the

ground that it left us free to call him in whenever we wanted him, and often when he would know that there was no real necessity for calling. There is a good deal of comfort that is worth all that it costs in feeling free to call in the physician whenever he is wanted, and not when he wants to come, and under such circumstances he should receive proper compensation. ROBERT T. MORRIS.

58 West 56th St.

NOTE.—Apropos to the above we quote the following from the Principles of Ethics: "Compensation for expenses. When a physician is summoned from a distance to the bedside of a colleague in easy financial circumstances, a compensation, proportionate to traveling expenses and the pecuniary loss entailed by absence from the accustomed field of professional labor, should be made by the patient or relatives."

ADHESIONS BETWEEN UTERUS AND RETAINED FETUS.

CLIFTY, KY., March 2, 1904.

To the Editor:—Recently there came under my observation a case in which there were adhesions between the fetus and upper cervical wall of the uterus; the adhesions corresponding to a point about the seventh cervical vertebra and a little below the internal os. This woman carried the child twelve months. When I saw her the membranes had been ruptured and the occiput was under the pubic arch. She never knew of any water escaping from her. Now I am unable to find in my text-books anything that proves my observation. Playfair cites the three celebrated cases of Drs. Oldham, Simpson and Cheston; in one case the child remained in uterus fifty-two years without decomposition, and in another the fetus wore out a hole through the uterine wall and gut, but he fails to state whether adhesions caused that or not. I believe the condition I have outlined is possible, since we know that ulcerations and wounds can affect the fetus without destroying its life, and we also know that ulcerations and ruptures of the membranes do occur without expelling the contents of the uterus, hence the possibility of two raw surfaces coming together and adhesion resulting. Is there a case on record which shows the possibility of such condition? If not, what is your opinion?

H. A. ELKOMIS.

ANSWER.—The report of this case is extremely unsatisfactory. Was the child living or dead? If alive, of course there must be some mistake about its having been carried twelve months. If dead, it was a case of missed labor. What was its condition? Was there a beginning lithopedion formation or a calcareous degeneration? Then the exact history of the pregnancy should have been given and the phenomena that probably occurred at the end of nine months or at the death of the child. The history of the termination of labor and final result should also be given. In cases of missed labor or missed abortion, that is, in retention of a dead fetus in the uterus, petrifying infiltration frequently occurs. Deposits are made in the membranes, the skin of the fetus and in the uterine decidua. In this way extensive adhesions may eventually form between the fetus and the uterus. Without further data to judge from, it seems probable that the adhesion found in the case reported was produced in this way. It was therefore the result of the retention of the fetus and not the cause, as seems to have been assumed by our correspondent.

PNEUMONIA MORTALITY.

FORT SMITH, ARK., March 8, 1904.

To the Editor:—Will you please give me the death rate from pneumonia according to the Census of the United States for the year 1900? Will you also tell me where to find the death rate from this disease in New York, Chicago and Boston during the last twenty years? Are there any statistics to prove that the death rate from pneumonia has been increasing during the past ten years?

JAMES A. FOLTZ.

ANSWER.—According to the U. S. Census the death rate per 10,000 in 1890 was 186.9, and for 1900, 192. This applies to the registration area which includes the New England states, New York, New Jersey, the District of Columbia and a few others. The best way to obtain the death rate in the larger cities would be to write direct to the departments of health, who could give the desired information. Nearly all the statistics of the cities in the northern part of the country show a decided increase in pneumonia in the last ten years. It, however, commenced before that time in many parts, in Chicago, for example. We think the municipal health departments and the secretaries of the boards of health of the different states would afford the best information in this regard. In many of the states there is no accurate registration, but in the larger cities a record of the deaths from all causes is being kept.

DISAPPEARANCE OF SYMPTOMS OF URETHRAL STRICTURE OF FOURTEEN YEARS' DURATION AFTER A SINGLE SOUNDING.

DR. B. T. SIMPSON, Buffalo, N. Y., sends us a report of a patient aged 33, who had specific urethritis at 18, and five months later the stream of urine diminished in size and force. The difficulty increased with years, so that he consulted Dr. Simpson, who passed a *bougie à boule*, size 12 French, without detecting any stricture. There was, however, some difficulty in passing the sphincter muscle. He then introduced successively steel sounds, Nos. 16, 20, 24 and 26, without difficulty. All symptoms disappeared and the patient could pass his urine freely and with considerable force. Nine months later there had been no recurrence of any of the symptoms. Dr. Simpson considers the case one of spasmodic stricture. This case is not extremely rare, but the length of time during which the case remained without relief is unusual.

BOOKS ON CLIMATOLOGY.

———, March 12, 1904.

To the Editor:—Can you give me the names and publishers of late works on climatology, including that of the seacoast? Not too voluminous. P. A. W.

ANSWER.—Large works on therapeutics like that edited by Solis-Cohen contain more or less thorough memoirs on the climatology from a medical point of view. (This volume was reviewed in THE JOURNAL, June 21, 1902, p. 1638.) For a general statement of the facts on climatology as a science perhaps one of the best works is the "Handbook of Climatology," by Dr. Hann (Professor Ward's translation), published by Macmillan & Co., price $3.00 net. It is not strictly a medical book, but its medical bearings are easily picked out in the text. It is a good work for the general reader and especially for the physician.

RIGHT TO PRACTICE—TEMPORARY ABSENCE FROM A STATE.

GUANTANAMO, CUBA, March 1, 1904.

To the Editor:—Please inform me whether one holding a certificate to practice medicine in Missouri, obtained in 1901, before the new act went into effect, and who then came into the service of the United States, is eligible to return and take up a practice, or is his certificate null after a certain length of time? It was registered with a county clerk in December, 1902. Will you give me the names of the secretaries of the boards of Missouri and Michigan? B. G. B.

ANSWER.—The certificate is not nullified by absence. The secretary of the Missouri board is Dr. Winn F. Morrow, Kansas City; of the Michigan board, Dr. B. D. Harison, Sault Ste. Marie.

THE DEATH OF DR. ROBERT D. MURRAY.

More than one correspondent has expressed surprise at having seen no notice in THE JOURNAL of the death of Dr. Robert D. Murray, whom they consider as certainly worthy of mention. Dr. Murray died Nov. 22, 1903, and a notice of his death appeared in THE JOURNAL, Nov. 28, 1903, six days later.

Marriages.

ROBERT B. SPALDING, M.D., Clinton, Ill., to Miss Nanna M. Scott, at Selma, Cal., March 6.

CHARLES EDWARD WRIGHT, M.D., to Miss Katrina Fertig, both of Indianapolis, March 1.

CHARLES E. CORD, M.D., Chicago Heights, Ill., to Mrs. Laura Beeler of Chicago, February 27.

LORIN C. COLLINS, M.D., Chicago, to Miss Anna R. Fan Stoff Lindblad, at Wheaton, Ill., March 10.

L. LENTON CULP, M.D., Little Eagle, S. D., to Miss Blanche Cornelius of Columbia City, Ind., Oct. 8, 1903.

BRUCE ANDERSON, M.D., Paris, Ky., to Miss Chorine Kern of Bourbon County, Ky., at Lexington, Ky., March 8.

MCMILLAN ROWLEY, M.D., Downey, Cal., to Miss Bessie Sutton of Denver, at Los Angeles, Cal., February 19.

R. ELMORE ROWLAND, M.D., Eldorado, Ark., to Miss Georgia Henry of Lancaster, Ky., at Little Rock, Ark., February 25.

GEORGE KAPELLE DE KAPELLE, M.D., Mount Vernon, N. Y., to Miss Jane L. Sturtevant of New York City, at New Rochelle, N. Y., February 27.

D. I. ASKREN, M.D., formerly of Mount Ayr, Iowa, but now a medical missionary at Medinet-el-Fayoum, Egypt, to Miss Alice B. Underwood, at Assiout, Egypt, February 10.

Deaths.

Ralph Schuyler Goodwin, M.D. College of Physicians and Surgeons, New York, 1866, some-time president of the Connecticut Medical Society, and of the Litchfield County Medical

Society; for sixteen years a member of the State Board of Health; member of the American Academy of Medicine and American Public Health Association; health officer of Thomaston, Conn., died at his home in that place, March 5, from Bright's disease, after an illness of one month, aged 64.

William J. McDermott, M.D. New York University, 1854, surgeon in the Civil War, who was with Colonel Ellsworth when he was shot at Alexandria, Va., aided in the amputation of the arm of Gen. O. O. Howard, and was a prisoner in Libby Prison; a personal friend of Presidents Lincoln and Grant, died at his home in New York City, March 12, after a lingering illness, aged 73.

Justin G. Thompson, M.D. University of Michigan, Ann Arbor, 1861, a surgeon in the Army during the Civil War; formerly president of the Erie County Medical Society, and for many years local surgeon of the Lake Shore and Michigan Southern Railway, died at his home in Angola, N. Y., March 6.

Peter Gourdin de Saussure, M.D. Medical College of the State of South Carolina, Charleston, 1878; a member of the American Medical Association, professor of obstetrics, gynecology and diseases of children in his alma mater, died at Riverside Infirmary, Charleston, S. C., from pneumonia, March 8, aged 48.

John Frank Geis, M.D. Medical College of Indiana, Indianapolis, 1891, professor of chemistry, toxicology and forensic medicine in the Medical College of Indiana; deputy coroner of Marion County, died at his home in Indianapolis, March 7, from pneumonia, after a short illness, aged 35.

Anton F. Blecki, M.D. Rush Medical College, Chicago, 1892, a member of the American Medical Association, and health officer of Sheboygan, Wis., died at his home in that place, from acute disease of the liver, for which operation was unsuccessfully made, March 6, aged 37.

Philip H. Brothers, M.D. Jacksonville Medical College, 1853, a member of the American Medical Association, and once a member of the legislature from Calhoun County, died suddenly in a field near his home in Zula, Ala., from heart disease, March 4, aged 74.

Charles H. Richmond, M.D. University of Buffalo, 1860, president of the village of Livonia, N. Y., for ten years, died from the effects of bichlorid of mercury, given by mistake for the mild chlorid, after an illness of six days, March 2, aged 63.

Robert Saunders Henry, M.D. University of Maryland, Baltimore, 1883, a graduate of the U. S. Naval Academy, Annapolis, Md., died at his home in Charleston, W. Va., March 10, from nephritis, after an illness of a year, aged 52.

John Orlando Scott, M.D. University of Louisville, 1862, of Sherman, Texas, surgeon in the Confederate service during the Civil War, died at St. Vincent's Sanitarium, Sherman, after a surgical operation, March 8, aged 66.

Ida R. Gridley-Case, M.D. College of Physicians and Surgeons, Boston, 1889, a member of the American Medical Association, died from pneumonia, March 9, after a short illness, at her home in Collinsville, Conn., aged 41.

Stanley G. Clarke, M.D. New York University, 1868, for a time a member of the board of health and president of the Central Hospital, Brooklyn, died at his home in that city from diabetes, March 5, aged 61.

Oliver W. Lindsay, M.D. Ohio Medical University, Columbus, 1896, coroner of Franklin County, Ohio, formerly secretary to the superintendent of health of Columbus, died at his home in Columbus, March 8, aged 29.

Verranus Morse, M.D. New York University, 1849, one of the founders of the Young Men's Christian Association, died at his home in Brooklyn, March 9, two days after a fall, in which he fractured his hip, aged 85.

Daniel Baert, M.D., for 43 years a practitioner of Zeeland, Mich., for 11 years president of the village, died at his home in that place, March 7, from paralysis, after an illness of several weeks, aged 64.

Charles T. Whybrew, M.D. College of Physicians and Surgeons, New York, 1870, died at his home in New York City, March 8, from Bright's disease, after an illness of several weeks, aged 62.

John S. Witcher, Jr., M.D. Kentucky School of Medicine, Louisville, 1891, of Salt Lake City, Utah, died at Holy Cross Hospital in that city, March 4, from gastric fever, aged 36.

James Eillingalea, M.D. University of Maryland, 1878, of Baltimore, died at Harrietstown, N. Y., March 2, aged 46.

August F. Reinhold, M.D. University of Berlin, Germany, 1876, of New York City, died in San Francisco, March 3.

Richard Huggins, M.D. Louisville National Medical College, 1894, died at his home in New Albany, Ind., March 6, from double pneumonia, after an illness of one week, aged 46.

Henry Albert Rundlett, M.D. Harvard University Medical School, Boston, 1887, died at his home in New York City, March 8, from pneumonia, after a brief illness, aged 47.

George A. Traylor, M.D. University of Tennessee, Nashville, 1882, of Bryantsville, Ky., died suddenly from apoplexy while making a professional call in Lancaster, Ky., aged 71.

David H. Poyneer, M.D. Fort Wayne (Ind.) College of Medicine, 1880, died at his home in Pomery, Wash., February 20, from heart disease, after an illness of about a year.

Lorenso D. McLean, M.D. New York University, 1866, died at his home in East Glastonbury, Conn., March 3, from pneumonia, after an illness of four days, aged 69.

Emory Potter, M.D. Hygeio-Therapeutic College of New York, 1860, died at his home in Saratoga Springs, N. Y., from organic heart disease, February 27, aged 72.

Samuel G. Dilburn, M.D. Medical College of Alabama, Mobile, 1890, of Braggs, Ala., was run over by a train at Wallace, and instantly killed, March 7.

George S. Storm, M.D. Homeopathic Hospital College, Cleveland, 1877, died at his home in Willoughby, Ohio, March 8, after an illness of one week, aged 48.

J. Milton Bowers, M.D. Bennett College of Eclectic Medicine and Surgery, Chicago, 1871, of San Francisco, died at San Jose, Cal., March 7, from paralysis.

Edward Down, M.D. Penn Medical University, Philadelphia, 1865, died at his residence in Kensington, Philadelphia, from Bright's disease, March 11, aged 65.

Israel P. Wilson, M.D. Keokuk Medical College, a dentist of Burlington, Iowa, died suddenly at his home in that city, from heart disease, March 9, aged 67.

Giles W. Van Vleck, M.D. Homeopathic Medical College, Philadelphia, 1852, died at his home in Jackson, Mich., March 4, after an illness of three weeks.

Aaron B. Robbins, M.D. University of Denver, 1885, died at his home in Denver, March 10, from paralysis, after a long period of invalidism, aged 79.

Moses D. Knight, M.D. University of Pennsylvania, Philadelphia, 1861, died at his home in Clinton, N. J., March 6, from heart disease, aged 70.

Pliny P. Gordon, M.D. University of Buffalo, 1865, of Hobart, Ind., died, March 9, at Ridgeland, Miss., where he had gone for his health, aged 68.

James B. Townsend, M.D. University of Nashville, 1869, died at his home in Montgomery, Ala., February 29, after an illness of two years, aged 68.

S. Alex Smith, M.D. Atlanta (Ga.) Medical College, 1891, died at his home in Thomasville, Ga., March 8, after a lingering illness, aged 37.

Romulus C. Biggs, M.D. Bellevue Hospital Medical College, New York, 1868, died at Portsmouth, Ohio, March 3, from typhoid fever.

Fred Mannhardt, M.D. Universities of Tübingen and Heidelberg, Germany, 1843, died at his home in Galion, Ohio, March 4, aged 87.

James D. Beck, M.D. Tulane University, New Orleans, 1870, died at his home in Mason, Texas, January 25, from Bright's disease.

James M. Saunders, M.D. Hahnemann Medical College, Chicago, 1871, died at his home in Dodge Center, Minn., January 23.

James D. Smallhorn, M.D. Trinity College, Dublin, Ireland, died from heart disease at his home in Buffalo, February 24, aged 63.

Frederick B. Jackman, M.D. University of Maryland, Baltimore, 1880, died recently at his home in Clinton, Conn.

W. C. Riley, M.D. University of Missouri, St. Louis, 1852, died at his home in Houstonia, Mo., March 7, aged 88.

Louis Turner, M.D. American Medical College, St. Louis, Mo., 1874, died at his home in St. Louis, March 5, aged 72.

Lawrence Hesselroth, M.D., surgeon in the U. S. Navy during the Civil War, died recently at his home in Chicago.

David D. Teal, M.D. New York University, 1867, died at his home in New York City, February 26, aged 66.

Augustus W. Munson, M.D. Cleveland Medical College, 1854, a retired physician of Kenton, Ohio, died recently.

Theodore F. Holmes, M.D. Indiana, 1897, died at his home in Pickard, Ind., March 6, from pneumonia, aged 60.

Franklin S. Douglass, M.D. Medical College of Georgia, Augusta, 1883, of Scranton, Pa., died recently.

George F. Bradbury, M.D. Tulane University, New Orleans, La., 1878, died suddenly at Modesto, Cal.

George W. Neville, M.D., died at his home in Bethel, Kan., February 21, from paralysis, aged 81.

M. C. Wilkinson, M.D., died at his home in Quitman, Ga., February 28.

Deaths Abroad.

A. A. Liebeault, M.D., the founder of the Nancy School of hypnotism died there February 18, aged 81. His attention was attracted to hypnotism by witnessing a subject bleed at the nose when ordered to do so during his sleep. As a pioneer he opened a clinic at Nancy for gratuitous treatment of ailments by suggestion. He was regarded as a charlatan and impostor until in 1881 Bernheim and others became convinced and joined his standard. Institutes for psychotherapy now exist in many places. One recently founded at Amsterdam is named for him, and his pupils gathered in 1902 to place a tablet on the house at Favières where he was born seventy-nine years before.

Jose Calvo y Martin, M.D., formerly professor of anatomy at Madrid and senator of Spain, died at Madrid, February 8, aged 90. In spite of his advanced age he still took an active interest in affairs, and only the week before his death was prominent in endorsing the child labor bill presented to the Spanish parliament by Dr. Tolosa Latour.

Magnus G. Blix, M.D., professor of physiology at Lund, Sweden, died there, February 14, aged 54. He was noted as an original investigator in the physiology of the muscles and special senses, and inventor of a number of instruments for use in physiologic research.

H. Emminghaus, M.D., professor of psychiatry at Freiburg until six months ago, died there, February 16, aged 68. He had served in a similar capacity at Würzburg and later at the Russian university at Dorpat. He has written numerous works on his specialty.

Book Notices.

A TEXT-BOOK OF OPERATIVE SURGERY. Covering the Surgical Anatomy and Operative Technic Involved in the Operations of General Surgery. Written for Students and Practitioners. By Warren Stone Bickham, Phar.M., M.D., Assistant Instructor in Operative Surgery, College of Physicians and Surgeons, New York. With 350 Illustrations, Entirely Original. Cloth. Pp. 984. Price, $6.00 net. Philadelphia, New York, London: W. B. Saunders & Co. 1903.

The author has devoted an unusual amount of space to the descriptive and surgical anatomy of the structures involved. This is perhaps of more use to the student in the dissecting room than to the surgeon in the operating room. About 140 pages are devoted to the arteries and veins, part of which is a rather needless elaboration. Under directions for differentiating arteries from veins it is stated in favor of arteries, "their thinner walls," under veins, "by having thinner coats." Should a vein be wounded when removing lymphatic glands from the neck, the author says: "If so situated (i. e., the wound in the vein) that closure can not be immediately made, the part should be flooded with water so that water stands over the open vein, to prevent the drawing in of air until the vein can be secured." It would be hard to conceive of anything that would make the discovery and control of a bleeding vein more difficult than to have the field flooded with water and blood. Under operations on the gasserian ganglion and its branches we find no mention of Cushing's method of approach, nor of Abbe's operation. Enucleation operations for tumors of the thyroid are also wanting. Under trephining the author states: "It is probably best to open the dura in all cases of trephining." This is not the rule of experienced surgeons. The dura should not be opened unless some inuication exists for so doing, for in many cases of fractures extradural hemorrhages, osteomyelitis, etc., the dura is not injured, and to open it would be entirely unnecessary and but increase the risks of infection. Most of the illustrations are new and well executed, but Figure 158 shows a front view of the lower end of the femur on a side view of the leg, and Figure 207 shows the excision of a tendon sheath from the extensor tendon of a finger where no tendon sheath exists. The technic of the various operations is well described, but where more than one method of operating is given there are no rules to aid an inexperienced operator in making a selection. Advice in this direction would have added materially to the value of the work. So far as the mechanical part of operating goes the work covers the ground very well.

THE AMERICAN YEAR-BOOK OF MEDICINE AND SURGERY FOR 1904. A Yearly Digest of Scientific Progress and Authoritative Opinion in All Branches of Medicine and Surgery, Drawn from Journals, Monographs and Text-Books of the Leading American and Foreign Authors and Investigators. Arranged, with Critical Editorial Comments, by Eminent American Specialists. Under the Editorial Charge of George M. Gould, A.M., M.D. In Two Volumes. Volume I, Including General Medicine. Pp. 673. Fully Illustrated; Volume II, General Surgery. Pp. 680. Fully Illustrated. Cloth. Price, per volume, $3.00 net. Philadelphia, New York, London: W. B. Saunders & Co. 1904.

These two volumes keep up the reputation of this annual that it has well deserved in the past. In a work like this it is necessary to cull from an immense amount of medical literature, and the ability to do this and to properly collate the important facts that are most worthy of note is not common, but Dr. Gould evidently has been able to command such ability. The names of the editors, including those of Drs. Chalmers DaCosta, Barton Cooke Hirst, W. A. Newman Dorland, V. P. Gibney, Walter L. Pyle and others in surgery; of Drs. Abbott, Church, Edsall, Crozer Griffith, A. O. J. Kelly, Riesman, Stengel and others in medicine, are sufficient evidence of the value and thoroughness of the work. It is one of the best periodical medical summaries that is available to medical readers in any English-speaking country. The two volumes make a total of over 1,200 pages of solid valuable matter.

A REFERENCE HANDBOOK OF THE MEDICAL SCIENCES, Embracing the Entire Range of Scientific and Practical Medicine and Allied Sciences. By Various Writers. A New Edition. Completely Revised and Rewritten. Edited by Albert H. Buck, M.D., New York City. Volume VII. Illustrated by Chromo-lithographs and 688 Half-tone and Wood Engravings. Cloth. Pp. 951. Price, $7.00 per volume. New York: Wm. Wood & Co. 1904.

This volume, the last but one of the complete Reference Handbook, covers subjects from saccharin to ulcer. Beside an enormous number of more or less short articles, there are included in this volume many exhaustive ones, so exhaustive that they may be called complete monographs. Among these may be mentioned those on scarlet fever, occupying 22 pages; the sexual organs, 47 pages; the spinal cord and its diseases, 115 pages; the stomach and its diseases, 68 pages; syphilis, 32 pages; teratology, 50 pages; tuberculosis, 16 pages, and typhoid fever, 12 pages. These articles, as well as the shorter ones, are as a rule written by those who are specialists in the subjects treated, and consequently are scientific and reliable. Since all subjects are brought well up to date, most of the articles have had to be rewritten in part; not a few of the subjects are entirely new. The work is proving to be one of the most complete and satisfactory cyclopedias of medicine that is to be had in any language.

BACTERIA, YEASTS AND MOLDS IN THE HOME. By H. W. Conn, Ph.D., Professor of Biology in Wesleyan University, Middletown, Conn. Cloth. Pp. 293. Price, $1.00. Boston and London: Ginn & Co. 1903.

Professor Conn is well known as well fitted to furnish a popular work on such a subject. He has brought together an amount of information which will be of value to the general public. The work is destined, he says, for all who are interested in household affairs, or who have the practical charge of homes and are interested in keeping them in good healthful conditions; we do not know any other work that could be better recommended for the ground covered. A little knowledge is sometimes a dangerous thing, but the facts given here are not so little as to prove perilous, and may be of decided value in correcting bad practices and misapprehension on the part of those who have charge of the health essentials of our daily life. It is popularly written and will be of interest to any general reader. The illustrations are numerous and good.

THE PRACTICAL CARE OF THE BABY. By Theron Wendell Kilmer, M.D., Associate Professor of Diseases of Children in the New York School for Clinical Medicine. Cloth. 12mo. Pages xiv-158, with 68 Illustrations. Price, $1.00 net, delivered. Philadelphia: F. A. Davis Company.

The author's object was to give, in rather more detail than is usual in works of this kind, the principal points that the mother or nurse should know in regard to the care of the child in its earliest months of life. With this in mind, Kilmer has included many illustrations as to the proper methods of holding the infant, etc., and these are a valuable addition. A diet schedule and a brief account of the disorders to which they are liable is added in the latter part of the book. The advice, of course, is not for home treatment, for the physician is almost universally recommended to be called in, but the recognition of the conditions is often very important. The book will be a very useful one for the inexperienced mother or nurse.

SUBJECTIVE SENSATIONS OF SIGHT AND SOUND. Abiotrophy and Other Lectures. By Sir William R. Gowers, M.D., F.R.C.P., F.R.S., Hon. Fellow R. Coll. Phys., Ireland. Cloth. Pp. 250. Price, $2.00. Philadelphia: P. Blakiston's Son & Co. 1904.

Among the English neurologists Sir William R. Gowers stands practically at the head, not only for his ability and contributions, but for his long and wide experience. In this little volume are included a number of lectures, which have appeared in print at various times in the past. They have been revised for the present publication. Their value was recognized as they appeared in the medical journals from time to time, and their collection in a book form is a convenience to the general reader, few of whom have had the opportunity to read all the originals, appearing as they did, some in the British medical weeklies, and some in the German journals and elsewhere.

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THE COMPLETE MEDICAL POCKET-FORMULARY and Physician's Vade-Mecum: Containing Upwards of 2,500 Prescriptions, Collected from the Practice of Physicians and Surgeons of Experience, American and Foreign. Arranged for Ready Reference Under an Alphabetical List of Diseases. Also a Special list of New Drugs, with Their Dosage, Solubilities and Therapeutic Applications; Together with a Table of Formulæ for Suppositories; a Table of Formulæ for Hypodermic Medication; a List of Drugs for Inhalation; a Table of Poisons, with Their Antidotes; a Posological Table; a List of Incompatibles; a Table of Metric Equivalents; a Brief Account of External Antipyretics; Disinfectants; Medical Thermometry; the Urinary Tests; and Much Other Useful Information. Collated for the Use of Practitioners. By J. C. Wilson, A.M., M.D., Physician to the German Hospital, Philadelphia. Third Revised Edition. Leather. Pp. 268. Price, $1.75; Thumb Index, $2.00. Philadelphia: J. B. Lippincott Co.

The title of this little work gives a fair idea of its contents. It will undoubtedly prove useful to many physicians, though like every other formulary only as an adjunct to original prescribing.

DISEASES OF THE NERVOUS SYSTEM. A Text-book for Students and Practitioners of Medicine. By H. Oppenheim, Professor of the University of Berlin. Translated and Edited by Edward E. Mayer, A.M., M.D., Pittsburg, Pa. Second American Edition, Revised and Enlarged. With 343 Illustrations. Cloth. Pp. 953. Price, $5.00 net. Philadelphia and London: J. B. Lippincott Co. 1904.

This second American edition of Oppenheim's work will be received with the favor that attended its predecessor. The new matter introduced by Professor Oppenheim in his third German edition has been translated and inserted, and the translator and editor has also added here and there some further data that have been obtained since the revision of the last German edition. Attention is called to the fact that Professor Oppenheim has incorporated in this work observations never published elsewhere, which gives the work an added value as an original source of information.

THE SELF-CURE OF CONSUMPTION WITHOUT MEDICINE, with a Chapter on the Prevention of Consumption and Other Diseases. By Charles H. Stanley Davis, M.D., Ph.D., Member of the Connecticut State Medical Society. Cloth. Pp. 176. Price, 75 cents. New York: E. B. Treat & Co. 1904.

This is one of the many semi-popular works that are appearing, and will probably continue to appear, in regard to the disease which is exciting so much popular attention at the present time. The author has brought together a valuable amount of instruction which the average consumptives or those who have charge of them, can receive with profit. In one place we notice what seems to us a slight tendency to fadism as regards diet, but such blemishes are few, and the work as a whole can be safely recommended.

MANUAL OF PRACTICAL ANATOMY. By D. J. Cunningham, M.D. Edin. et Dubl., D.Sc., LL.D., D.C.L. Oxon., F.R.S., Professor of Anatomy in the University of Edinburg. Volume I: Upper Limb, Lower Limb, Abdomen. Volume II: Thorax, Head and Neck. Third Edition. Illustrated. Cloth. Pp. 605 and 607 Respectively. Price, $5.00. Philadelphia: J. B. Lippincott Company. 1903.

This manual of practical anatomy appears in this edition in the form of a series of volumes, the first on the upper and lower extremities and abdomen, and the second on the thorax, head and neck. The illustrations are a valuable addition for the understanding of the descriptions. It is one of the most convenient and best anatomic manuals that we have seen, certainly one of the most up to date, which is of some importance.

MANUAL OF MEDICINE. By Thomas Kirkpatrick Monro, M.A., M.D., Fellow of and Examiner to the Faculty of Physicians and Surgeons, Glasgow. Cloth. Pp. 901. Price, $5.00 net. Philadelphia and New York: W. B. Saunders & Co.

This book is not elaborate enough for a work on practice—that is to say, one that completely meets the needs of the practitioner; it is one that will be useful to the medical student, or to one who desires to brush up. Within its limitations it is generally admirable.

Miscellany.

The True Physician.—Methods of conduct are of just importance; business methods are of just importance, and while it is impossible, perhaps, to make a gentleman out of a rogue, yet every physician must know the principles of conduct, and know them well. There is needed the spirit of a gentleman, a scholar and a good citizen to make the true physician.—*Medical Fortnightly.*

Streptococcus Serum in Infections.—A. Hirsch has been much impressed with the value of antistreptococcus serum in the treatment of streptococcus infections. He describes, in the *St. Petersburg. med. Wochenschrift*, Vol. 28, No. 44, 1903, a small epidemic of scarlet fever in which the effect of the serum was unmistakable. He warns that the drop in the temperature is not enough to determine whether the initial dose has been adequate. The heart, pulse, respiration and general condition must be taken into account besides. He thinks that there is a field of usefulness for these injections in mixed infection with tuberculosis when streptococci are numerous in the sputa.

One Sort of Saving.—Dr. Cyrus Edson of New York, who had a large income from his practice, left a personal estate of only $4,000. His widow explains that Dr. Edson's charity was as large as his professional ability and his capacity for work. No one, however poor, would be turned away without advice, as Dr. Edson was always ready to give them the benefit of his professional skill. Several years ago a citizen of Baltimore, who had given much to charity, failed in business. One of his friends, in talking over the situation, asked him if he did not feel now that misfortune had overtaken him, that he had made a mistake, giving away so much. "Mistake?" he asked, with a show of surprise. "Bless your soul, that is all I have saved out of the wreck." The above is from the *Waterbury (Conn.) Republican.* Charity should be freely exercised, but the failure to secure payment from those who could pay at least a small fee is not charity, but sin—injuring the physician, the patient, the profession and the public.

Intoxication with Laundry Bluing.—A. Kramer of Dorpat relates, in the *St. Petersburg med. Woch.*, that he was summoned to a child in convulsions with mydriasis and pulse and respiration growing constantly fainter and more irregular until the latter ceased completely. The child had eaten two balls of laundry bluing three hours before. Not knowing the composition of the bluing he was at a loss what to do. He could only proceed symptomatically, and succeeded in reviving the patient with artificial respiration, brandy and milk per os and per rectum and wine of antimony. The child gave the first signs of spontaneous movements after three hours of these efforts, after which he rapidly recuperated, and by the next morning was

apparently quite well, except for some loss of appetite, explainable by the amount of alcohol taken. Study of the laundry blue showed that it was composed of ultramarine, and that the ingredients of the latter are kaolin, soda, sulphur and carbon or similar substances which generate sulphuretted hydrogen in the presence of an acid or acid salts. The intoxication was, therefore, due to H_2S. It must have been absorbed from the stomach into the blood, but did not cause any toxic action on account of the alkalinity of the blood, until it reached the lungs, where it probably became free again and exerted its specific action. As a proportion of .02 per cent. of H_2S in the air has a toxic effect, the symptoms observed are easily explained, also the long latency before they developed. Cahn has reported a case in which a student intoxicated with sulphuretted hydrogen in the morning did not develop symptoms until late in the afternoon.

Diabetes from Fright.—A. Lorand of Carlsbad has observed 2 cases of fatal diabetes occurring in previously healthy young women consecutive to a severe fright. (*St. Petersburg. med. Wochenschrift*, Vol. 28, No. 22, 1903.) In the first case the young woman while bicycling narrowly escaped being run down by a trolley car. She felt that "her heart stood still," but was able to pedal home. She felt exhausted the next day, and by the fifth, thirst and polyuria attracted attention, and in two or three weeks 7 per cent. sugar was discovered in the urine. By the fifth month symptoms of severe diabetes had become established, somewhat improved by a stay at Carlsbad, but then continuing a progressive course with death in about a year after the fright. The second patient was a robust girl of 16, who was attacked by a man in a dark street on her way home from school. She escaped unharmed, and fled into the house near by. The next day she noticed that her mouth was very dry and that she felt exhausted. This was followed by symptoms of dyspepsia and gradual emaciation for six months before any one thought of examining her urine. Sugar was found in the proportion of 8 per cent., and a course at Carlsbad also improved the symptoms in this case, but terminal coma developed not long afterward. The urine had never been examined in these cases before the fright, and the diabetes may possibly have previously existed. The unwavering good health, however, speaks against this assumption.

The Public Service.

Army Changes.

Memorandum of changes of station and duties of medical officers of the Army for the week ending March 12, 1904:

Woodson, Robert S., asst.-surgeon, so much of paragraph 1, S. O., as granted two months' leave, amended to read one month, with permission to apply for thirty days' extension.

Torney, George H., deputy surgeon general, left from duty as chief surgeon, Department of California, en route to take command of U. S. Army General Hospital, Presidio of San Francisco.

Maus, Louis M., deputy surgeon general, granted thirty days' sick leave to take effect on the arrival of Captain Elmer A. Dean at Fort Riley, Kan.

Girard, Alfred C., asst.-surgeon general, announced as chief surgeon, Department of California, San Francisco.

Kulp, John S., asst.-surgeon, relieved from duty as attending surgeon and examiner of recruits, Philadelphia, and ordered to Fort McDowell, Cal.

Dean, Elmer A., asst.-surgeon, leave extended fourteen days.

Mabry, William C., contract surgeon, granted an eight days' extension of his leave of absence from the Department of the Lakes.

Navy Changes.

Changes in the medical corps of the Navy, week ending March 12, 1904:

Thompson, E., P. A. surgeon, detached from the Marine Detachment, Culebra, W. I., and ordered to the *Des Moines*.

Furlong, F. M., P. A. surgeon, detached from Naval Station, Guantanamo, Cuba, and ordered to the Marine Detachment, Culebra.

Orvis, R. T., P. A. surgeon, detached from the Marine Department, Culebra, and ordered to Naval Hospital, New York.

Angney, G. L., P. A. surgeon, detached from Panama Marine Brigade, and ordered to the Naval Station, Guantanamo.

Richardson, R. R., asst.-surgeon, detached from the *Amphitrite* and ordered to Naval Hospital, Pensacola, Fla.

Stepp, J., asst.-surgeon, detached from the Navy Yard, Boston, Mass., and ordered to the *Des Moines*, temporarily, and then return to duty at the Boston Navy Yard.

Spratling, L. W., surgeon, detached from the Bureau of Medicine and Surgery and ordered to the Marine Battalion, on the Isthmus of Panama.

Marine-Hospital Service.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service, for the seven days ended March 3, 1904:

Nydegger, J. A., P. A. surgeon, granted leave of absence for one month from March 5, 1904, on account of sickness.

McMullen, John, P. A. surgeon, bureau order of Dec. 3, 1903, relieving P. A. Surgeon McMullen from duty at Hongkong, China, and directing him to proceed to San Francisco, amended so that he shall report to the chief quarantine officer at Honolulu for temporary duty.

Fricks, L. D., P. A. surgeon, relieved from duty at the Immigration Depot, New York City, and assigned to duty in the office of the United States Consul at LaGuayra, Venezuela.

Goldberger, Jos., and Korn, W. A., asst.-surgeons, to report to chairman of board of examiners at Washington, D. C., March 9, 1904, for examination to determine their fitness for promotion to the grade of P. A. surgeon.

Holt, J. M., asst.-surgeon, to proceed to San Francisco.

Trotter, F. E., asst.-surgeon, relieved from duty at San Francisco and directed to report to P. A. Surgeon Rupert Blue, Plague Laboratory, San Francisco, for duty.

Lloyd, R. J., asst.-surgeon, relieved from duty at San Francisco and assigned to duty in the office of the United States Consul at Callao, Peru, Feb. 23, 1904, to proceed to Concord, Cal., for special temporary duty March 1, 1904.

Boggess, J. S., asst.-surgeon, granted leave of absence for three days from February 18.

Warren, R. S., asst.-surgeon, granted one day's extension of leave of absence Feb. 22, 1904.

Manning, H. M., asst.-surgeon, relieved from duty at Honolulu, T. H., and directed to proceed to Manila, P. I., and report to chief quarantine officer for assignment to duty.

Ashford, P. A., asst.-surgeon, granted leave of absence for ten days from March 28.

Richardson, S. W., pharmacist, to proceed to St. Louis and assume charge of the Marine Hospital exhibit at the Louisiana Purchase Exposition.

PROMOTION.

Perry, J. C., P. A. surgeon, commissioned as surgeon.

BOARDS CONVENED.

Board convened at Washington, D. C., Feb. 29, 1904, for the physical examination of candidates for position of second assistant engineer, Revenue-Cutter Service. Detail for the board: Asst.-Surgeon-General L. L. Williams, chairman; Asst.-surgeon A. J. McLaughlin, recorder.

Board convened at Washington, D. C., March 4, 1904, for the physical examination of Chief Engineer G. B. Maher, Revenue-Cutter Service. Detail for the board: Asst.-Surgeon-General L. L. Williams, chairman; Asst.-Surgeon-General W. J. Pettus, recorder.

CASUALTY.

Russell, Howard C., asst.-surgeon, died at Stapleton, N. Y., March 2, 1904.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon General, Public Health and Marine-Hospital Service, during the period from March 6 to March 12, 1904:

SMALLPOX—UNITED STATES.

California: Escondido, Feb. 23-March 3, 1 case.
District of Columbia: Washington, Feb. 27-March 5, 6 cases.
Florida: Jacksonville, Feb. 27-March 5, 7 cases.
Illinois: Feb. 27-March 5, Chicago, 4 cases; Danville, 1 case; Springfield, Feb. 25-March 3, 2 cases.
Louisiana: New Orleans, Feb. 25-March 3, 7 cases imported.
Michigan: Detroit, Feb. 27-March 5, 1 case; 88 localities, Feb. 20-27, present.
Missouri: St. Louis, Feb. 27-March 5, 13 cases.
New Hampshire: Manchester, Feb. 27-March 5, 7 cases, 1 death.
New Jersey: Feb. 27-March 5, Camden, 2 cases; Trenton, 1 case.
New York: Feb. 27-March 5, Buffalo, 1 case; New York City, 1 case; Niagara Falls, Feb. 20-March 5, 2 cases.
North Carolina: Wilmington, March 1-5, 3 cases.
Ohio: Cleveland, Feb. 26-March 4, 1 case; Dayton, Feb. 27-March 5, 19 cases, 2 deaths.
Pennsylvania: Altoona, Feb. 24-March 5, 1 case imported; Carbondale, Feb. 29-March 7, 1 case; Feb. 27-March 5, Johnstown, 5 cases; Philadelphia, 33 cases, 6 deaths; Pittsburg, 4 cases.
South Carolina: Greenville, Feb. 20-27, 2 cases.
Tennessee: Feb. 27-March 5, Memphis, 36 cases, 2 deaths; Nashville, 7 cases.
Wisconsin: Milwaukee, Feb. 27-March 5, 4 cases.

SMALLPOX—INSULAR.

Porto Rico: San Juan, March 8, 6 cases.

SMALLPOX—FOREIGN.

Austria: Prague, Feb. 13-20, 3 cases.
Belgium: Antwerp, Feb. 13-20, 6 cases, 1 death.
Brazil: Pernambuco, Jan. 16-31, 28 deaths; Rio de Janeiro, Jan. 31-Feb. 7, 37 cases, 27 deaths.
Canada: Quebec, Feb. 27-March 5, 3 cases.
China: Chefoo, Feb. 6, present; Shanghai, Jan. 16-30, 3 cases, 37 deaths.
France: Feb. 6-13, Lyons, 1 death; Paris, 36 cases, 1 death.
Great Britain: Feb. 12-26, Edinburgh, 12 cases, 1 death; Glasgow, 51 cases, 3 deaths; Leeds, Feb. 20-27, 1 case; Feb. 13-20, London, 9 cases; Manchester, 1 case, 1 death; Nottingham, Feb. 6-20, 33 cases, 1 death.
India: Bombay, Feb. 2-9, 8 deaths; Calcutta, Jan. 30-Feb. 6, 2 deaths; Karachi, Jan. 31-Feb. 7, 4 cases.
Java: Batavia, Jan. 23-30 16 cases, 2 deaths.
Malta: Feb. 6-13, 1 death.
Mexico: City of Mexico, Feb. 21-28, 5 cases, 4 deaths.

Russia: Feb. 6-13, Moscow, 5 cases, 2 deaths; St. Petersburg, 3 cases, 1 death.
Spain: Santander, Feb. 21-28, 4 cases, 1 death.
Turkey: Constantinople, Feb. 14-21, 4 deaths; Smyrna, Jan. 31-Feb. 7, 1 case.
Venezuela: Maracaibo, Feb. 7-14, 1 case, 1 death.

YELLOW FEVER.

Brazil: Rio de Janeiro, Jan. 31-Feb. 7, 4 cases, 3 deaths.
Mexico: Merida, Feb. 21-27, 2 cases: Vera Cruz, Feb. 20-27, 1 case.

CHOLERA—INSULAR.

Philippine Islands: Jan. 23-30, Manila, 1 case, 1 death; Provinces, 130 cases, 90 deaths.

CHOLERA—FOREIGN.

India: Calcutta, Jan. 31-Feb. 6, 14 deaths.

PLAGUE—INSULAR.

Hawaii: Hilo, March 4, 1 death.
Philippine Islands: Manila, Jan. 16-Feb. 20, 5 cases, 3 deaths.

PLAGUE—FOREIGN.

Africa: Port Elizabeth, Jan. 8-16, 2 cases.
Brazil: Pindamonhangaba, Jan. 15, several cases; Rio de Janeiro, Jan. 31-Feb. 7, 7 cases, 4 deaths.
India: Bombay, Jan. 2-9, 419 deaths; Calcutta, Jan. 30-Feb. 6, 50 deaths; Karachi, Jan. 31-Feb. 7, 49 cases, 37 deaths.

Medical Organization.

Arkansas.

EIGHTH COUNCILOR DISTRICT MEDICAL SOCIETY.—This society was organized at Little Rock, February 24, and elected the following officers: President, Dr. George S. Brown, Conway; vice-president, Dr. Strodder U. King, Little Rock, and secretary, Dr. William C. Dunaway, Little Rock. The meeting was followed by a banquet, over which the vice-president presided as toastmaster.

Indiana.

FLOYD COUNTY MEDICAL SOCIETY.—At the annual meeting held in New Albany, March 3, the standard constitution and by-laws was adopted and the following officers were elected: President, Dr. Harvey S. Wolfe; vice-president, Dr. William P. Tebault; secretary and treasurer, Dr. Austin Funk; censors, Drs. Charles W. McIntire, George H. Cannon and Elihu P. Easley, and delegate to state society, Dr. Elihu P. Easley, all of New Albany.

Montana.

BEAVERHEAD COUNTY MEDICAL SOCIETY.—The physicians of the county met at Dillon, February 29, and organized a medical society, adopting the standard constitution and by-laws, and electing the following officers: Dr. Harry A. Bond, Dillon, president; Dr. Louis C. Ford, Lima, vice-president; Dr. F. M. Poindexter, Dillon, secretary; Dr. Robert H. Ryburn, Bannack, treasurer, and Dr. Maurice A. Walker, Dillon, delegate to state medical association.

Pennsylvania.

MEDICAL SOCIETY OF THE CITY OF READING AND THE COUNTY OF BERKS.—Under the foregoing title the Medical Faculty of Berks County, which was disbanded in 1870, reorganized February 23.

Tennessee.

CAMPBELL COUNTY MEDICAL SOCIETY.—Pursuant to a call by Dr. Deering J. Roberts, Nashville, secretary of the Tennessee State Medical Association, physicians of the county met in La Follette, February 6, and organized a medical society, with a membership of 16, and the following officers: President, Dr. Irwin J. Shepherd, La Follette; vice-president, Dr. Joseph L. Rose, Jellico; secretary, Dr. Joseph U. Roach, La Follette; treasurer, Dr. Frank H. McClintock, Newcomb; committee on public health and legislation, Drs. Winfield M. Caldwell, Wellspring, A. M. Riggs, La Follette, and J. L. Hefferman, Jellico, and censors, Drs. W. B. Rose, E. E. Shivers, and G. R. Wright, all of La Follette. This society has received its charter, and is receiving the hearty co-operation of the profession.

Society Proceedings.

COMING MEETINGS.

Medical Society of the Missouri Valley, Lincoln, Neb., March 24.
American Association of Pathologists and Bacteriologists, New York City, April 1-2.
Medical Association of the District of Columbia, Washington, April 5.
Tennessee State Medical Association, Chattanooga, April 12.
South Carolina Medical Association, Darlington, April 13.

CHICAGO ORTHOPEDIC SOCIETY.

Regular Meeting, held Feb. 29, 1904.

The President, Dr. A. B. Hosmer, in the Chair.

Compound Fracture of the Patella and Condyles.

DR. A. E. HALSTEAD reported a case of a man, who, while riding on the platform of a fast train, was struck by an iron girder, which produced a compound comminuted fracture of the patella. The external condyle was completely fractured, and the joint attached simply by the portion of the external lateral ligament. The patient was brought to St. Luke's Hospital, anesthetized, the parts cleansed, and the patella sutured with catgut; the joint thoroughly washed out with 1 per cent. solution of carbolic acid; a cigarette drain placed in the joint for twenty-four hours, and another one inserted at the outer aspect of the joint. The result was excellent, patient having a considerable degree of motion.

He had had other cases of compound fracture of the patella, and had always secured primary union. He had not seen infection in any of them. He attributed the good results largely to thorough antisepsis, using a 1 per cent. solution of carbolic acid freely, and then draining the joint for twenty-four hours.

DR. W. P. VERITY reported excision of the knee-joint three months after an injury to a boy of 14, who fell against a flywheel. The exact mode of injury was unknown. The result of operation was excellent.

Tuberculous Knee-Joint, with Pulmonary Complications, Excision.

DR. GAY reported this case for Dr. W. H. Allport, and showed specimens. The patient was a man, 28 years of age, who gave a history of trauma dating back two years, followed by more or less swelling of the knee, which gradually increased. About sixteen months from the time of the injury, the patient began to have a slight cough, and consulted Dr. Allport four weeks ago. Physical examination disclosed tuberculosis of the apex of the left lung, dullness, and the characteristic signs of apical tuberculosis. Practically an excision of the knee-joint was done. In the joint proper were the more pronounced tubercular lesions. Sections removed at several points and carefully examined disclosed typical tubercular formations. The bone itself was not particularly involved, except inside the capsule. Since the operation, the man had had a slight temperature, but was doing fairly well. The tubercular process involved the bursa over the great trochanter.

DISCUSSION.

DR. HOSMER said that this case raised the question of the relative frequency of the primary focus of tuberculosis, whether it occurred in the soft tissues or in bone. He asked Dr. Owens, who had seen the case, whether he thought it was capsular or osteal tuberculosis.

DR. JOHN E. OWENS replied that he was not in a position to say whether the tubercular process had involved the bone or not, but he thought it implicated other structures. He believed that the head of the tibia was involved. When the joint was first opened, a collection of material was removed which resembled in appearance a tapeworm. A certain well-known surgeon, he said, had stated that in his opinion rice bodies were tuberculous in nature. Dr. Owens had seen a few cases of rice bodies in joints that he thought were not due to tuberculosis. When a man had pulmonary tuberculosis, which was demonstrable, he usually succumbed to it sooner or later, and it was a question whether an operation should be done in such a case. He believed the consensus of opinion was against operations in such cases. At the same time, excision was performed in Dr. Allport's case, as the patient suffered excruciating pain.

DR. EDWIN W. RYERSON had seen several cases of rice bodies in the knee which were not tuberculous. He saw one knee-joint opened which contained twenty flattened bodies, which looked like pumpkin seeds. He stated that Nichols of Boston maintained that there were very few cases of primary synovial tuberculosis.

DR. A. E. HALSTEAD said that Koenig believes that fully 50 per cent. of the cases in adults are primary synovial tuber-

culosis. Dr. Halstead himself had seen cases in which primary synovial tuberculosis was demonstrated.

DR. ALEXANDER C. WIENER said that primary synovial and osteal tuberculosis were not really primary conditions; that the tubercle bacilli were carried by the blood current into the knee-joint from some other part of the body, probably the lung or the bronchial glands. The French Congress of Surgery agreed with Koenig that fully 50 per cent. of the cases of tuberculosis in adults were primarily synovial. There was no doubt but that there were cases of primary tuberculosis of the bursa above the trochanter. This might be compared with the primary seat of the disease in the synovial membrane of the joint.

DR. HOSMER said that while he did not wish to detract from the reputation or standing of Koenig, yet as regards tuberculosis of bones, he thought one could question the correctness of Koenig's diagnoses in many cases that were not operated on. So far as he knew, the statistics of Koenig were not corroborated by skiagraphy. His own impression was that the occurrence of anything like 50 per cent. of capsular tuberculosis in children was erroneous.

DR. HALSTEAD said he referred to adults, not to children.

DR. HOSMER said he had come to the conclusion that cases of tuberculosis of bones, particularly of the knee-joint, in adults, never recovered without operation. As to operating when there was already lung involvement, if the involvement was only slight, he thought it would give the patient a better chance to remove whatever focus of the disease one could. He did not think anyone, in speaking of the primary focus, referred to the atrium of invasion of the system by tuberculosis.

Dr. Hosmer also showed a case of unusually extensive resection of the knee for infection.

DR. NORMAN KERR had made observations on cases of tuberculosis of the hip joint that were operated on early by Dr. M. L. Harris, and on one or two cases by himself, in which the results were much better than by the expectant plan of treatment. He did not see why the same principle should not apply to the knee as well as to the hip.

DR. HOSMER reported an interesting case of excision of the knee for ankylosis.

Supracondyloid Femoral Fracture, with Complications.

DR. JOHN E. OWEN reported two cases. One was a man, aged 30, who sustained a simple supracondyloid fracture of the left femur and a compound comminuted supracondyloid fracture of the right femur. The line of fracture on the right side was just above the condyles, which were detached, the one from the other, and variously comminuted. Both legs were cold, the circulation in the right below the knee having ceased. Shock was extreme. For this he was subjected to the usual treatment, and, by the following morning, reaction having supervened, the right leg was amputated through the lower third of the thigh. The left leg was placed on a double inclined plane, abundantly padded. Dry gangrene became manifest within nine days, but it did not extend beyond the second, third, fourth and fifth toes. The leg, however, enveloped in cotton, remained warm. Eventually, moist gangrene involved a patch of skin the size of a silver dollar on the back of the foot, close to the instep. Another portion appeared on the external aspect of the leg a short distance below the knee, and still another about the middle of the leg on its external aspect. The skin, from the middle of the leg to the ankle on the external aspect, became purple, and the foot and ankle swollen. The knee was wider than normal, and the lower end of the upper portion of the femur was somewhat prominent externally.

The line of fracture was oblique and extended from above downward and outward, the upper extremity of the broken surface of the lower piece being very sharp. The popliteal artery rested immediately beneath the upper end of the lower fragment at its center, the soft tissues intervening between the vessel and the bone hardly exceeding one-eighth of an inch in the hardened specimen. A thrombus closed the artery at the point of section and extended upward doubtless to the first collateral branch. Below the line of the knee-joint a thrombus occluded the vein. The distance from a line touching the articulating surfaces of the condyles to the upper and inner extremity of the fractured surface of the lower fragment was four inches. The lower terminus of this broken surface was one inch and a quarter nearer the line just named.

This case illustrates the great danger of supracondyloid fractures of the femur. In the case of the right leg the circulation was at once arrested by the violence of the injury. In spite of the fact that the left leg was treated on a double inclined plane, the circulation became more and more enfeebled; gangrene supervened, as noted above; union at the end of twenty-five days having absolutely failed, both pulse and temperature being high, amputation of the lower third of the femur was performed Jan. 6, 1904. January 17, the progress of the case was satisfactory.

In the light of this case must the double inclined plane, on which thousands of supracondyloid fractures of the femur have been successfully treated, be discarded as the chief element in the treatment? Must the drill and the wire be employed even at the expense of opening into the knee joint in certain cases? Would section of the tendo Achilles in addition to flexion have saved this limb?

Each case presents for solution a problem essentially its own.

The second case was a man, aged 67, who was at work when an engine struck a handcar, and this in turn struck the patient, knocking him from the track. He sustained the following injuries: A linear fracture, about two inches in length, of the left frontal bone, and over this an irregular laceration of the scalp extending from the eyebrow backward four and one-half inches, the eyelids being "black and blue" and the eyeball suffused; a fracture of the left knee—a chipping off of a portion of the external tuberosity of the tibia, the fragment being freely movable and crepitus being easily elicited; a supracondyloid fracture of the right femur with marked displacement of the lower fragment forward, carrying the patella conspicuously in the same direction. The position of the lower piece, locked in this unusual position, is well illustrated in the figure. There was also a comminuted generally oblique fracture of the right tibia extending from above downward and inward, and entering the knee-joint at its upper extremity. The head of the fibula was also broken and there were two lacerated wounds, each about an inch in length, over the left patella, reaching the surface of this bone, but not entering the joint. The left leg is smaller than the right in consequence of a congenital pes planus. The anterior portion of the leg over the seat of the fractured tibia was very concave as a result of this fracture. There were no head symptoms. The left leg was encased in plaster of Paris in the extended position. The right leg, flexed to an angle of forty-five degrees, was encased in plaster of Paris from the ball of the toes to the groin, strong traction having been made by means of the hands placed behind the seat of the fracture in the tibia, during the application of the plaster and while the plaster was setting. This was done in order to relieve the deformity in the upper portion of the leg—the concavity above referred to. The leg was then suspended. All dressings were removed on the fifty-first day. The fluoroscope showed a very satisfactory apposition in the femur and tibia on the right side. The result on the left side was also satisfactory.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Regular Meeting held Feb. 29, 1904.

The President, Dr. Wendell C. Phillips, in the Chair.

The Surgery of the Common Duct of the Liver.

DR. WILLIAM J. MAYO, Rochester, Minn., said that in the majority of cases the gall bladder was infected through the bile and not by way of the common duct and duodenum, and a gall bladder once infected remained infected, needing only a disturbing element to reproduce its original intensity. In the experience of Dr. Mayo, at least 90 per cent. of all cases of common duct disease brought to operation arise from an infected gall bladder which contains stones, causing mechanical irritation, this being the most favorable condition for frequent

bacterial excursions into the common duct; if this is accompanied by calculi which failed to pass the duodenal orifice then the conditions are favorable for the development of cholangitis, pancreatitis, etc. The primary importance of the gall bladder must be recognized in the etiology of these infections and operation projected at a time when the infection and stones are still in their original viscus. The cystic duct and its patency is the most important element in the problem and the question of treatment is to a large extent based on its condition. If it is closed mechanically a diseased gall bladder results, which is better out than in. The keynote to the diagnosis of this condition is that the gall bladder contains no bile. Cholecystectomy is easily performed from below upward, enabling one to carefully ligate the deep parts and to make a bloodless separation from the liver, whereas if the gall bladder be removed from above downward the same vessels will be cut over and over again, obscuring the deep field with blood. If the gall bladder contains bile, with a marked infection of the common duct, provision should be made for bile drainage to the surface, best done by a cholecystostomy and draining through natural passages. One should carefully examine the ducts for stones in all cases, even though there be no special reasons to anticipate their presence beyond the fact that the gall bladder contains stones. For all operations on the ducts Robson's method should be employed. In removing stones from the common duct the finger is the only reliable guide, if the duct is dilated from obstruction sufficiently to permit this.

Dr. Mayo stated that he and his brother had had 26 cases of chronic pancreatitis, and in most of them no stones were found, and either cholecystostomy or cholecystenterostomy was performed. All recovered. Four of these returned with a renewal of previous symptoms and, whereas no stones had been detected at the first operation, stones were found at the second operation in the ampulla in each case. He emphasized again the importance of opening the common duct and exploring with the finger in cases of chronic pancreatitis. He said that the reparative power of the common duct was not exceeded by any mucous-lined channel in the body, and he then cited three cases to illustrate this fact. He said he could not too strongly urge the complete removal of all stones at one sitting if the patient was able to bear the operation. Cholecystenterostomy is indicated by disease of the common duct and the bowel selected should be the duodenum, but in five of their cases this was impossible and the transverse colon was selected with just as satisfactory results. Appended was a table of 107 operations on the common duct, which occurred in 728 operations on the gall bladder and bile passages which had been operated on by Dr. Charles H. Mayo and himself.

DISCUSSION.

DR. ROBERT F. WEIR said that he was particularly glad to note that the common duct could be laid open, examined, closed, and would regain its serviceableness.

DR. JOSEPH A. BLAKE referred to the method of reaching the common duct by liberating the duodenum for the purpose of attaching it to the cardiac end of the stomach by incising the peritoneum between the duodenum and kidney. In this way the duodenum could be readily turned to the left and the whole of the common duct inspected as well as palpated.

DR. WILLY MEYER emphasized the importance of not responding to the pleadings of patients for immediate operation, with stones in the common duct for a long time when jaundice sets in for the first time. The conditions in the common duct are more active at this time than at any other, and he advised waiting until the acute symptoms subsided before resorting to operative interference, as in cases of acute appendicitis. Stones in the gall bladder may lead to stones in the common duct and, therefore, it is important to remove the stones from the gall bladder as soon as recognized.

DR. SAMUEL LLOYD emphasized the importance of preserving the gall bladder if it could be made serviceable and deprecated the advocacy by many surgeons of removal of the gall bladder in every instance of stone.

DR. THOMAS H. MANLEY believed that the surgery of the gall bladder had been kept back for years because of the fear entertained by many of opening the upper right quadrant of the abdomen, and to-day it was believed by many to be much safer than the surgery of the appendix.

DR. MAYO said that in acute cases it was better to wait until the fever and initial symptoms had subsided. If the patient was without fever or chills, and was not feeling very ill, it was best to operate at once. In cases of cholangitis with very acute symptoms he said it was not a question of stones, but the infection of the ducts, and many patients died from this without being operated on. He did not believe the gall bladder should be removed unless positively indicated. The so-called ideal operation was to cut into the gall bladder, remove the stones, and sew it up. The removal of the gall bladder was determined by the amount of infection present.

Special Report of the Counsel of the Society.

MR. CHAMPE S. ANDREWS related the circumstances which led up to the arrest of Blinn and Conrad, two abortionists who have been working in this city for years. Blinn forfeited bail and fled. Conrad is now in jail, not being able to furnish $10,000 bail.

Consolidation of the Society and the Association Ratified.

Ratification of the action of the state society by each county society was announced to be requisite for the completion of the consolidation, and the action of the state society was ratified without a dissenting voice. The interest in the matter of ratification caused the hall to be packed, and there was not only perfect harmony, but enthusiasm over this further step in the peace that has now been declared after twenty-two years of discord.

LIVERPOOL BIOLOGICAL SOCIETY.

Meeting held Feb. 12, 1904.

Trypanosomes and Sleeping Sickness in Uganda.

Colonel Bruce, R.A.M.C., gave a lecture on this subject, with numerous lantern illustrations, in which, after referring to the discovery in 1888 in India of the rat trypanosome, *T. lewisi*, by Surgeon-Major Lewis, and of that surra, *T. evansi*, a little later, the lecturer proceeded to give a short history of his own discovery of the tsetse-fly parasite, *T. brucei*.

It appears that when he was stationed in Maritzburg in 1894, Governor Hutchinson asked him to go to Zululand to report on a disease among native cattle called "nagana," which threatened to ruin the natives in certain districts. When he reached Ubombo, a magistracy on the top of the Tebombo range of mountains, which here forms the eastern boundary of Swaziland, he found most of the cattle already dead, and the survivors in an emaciated condition. He set up his primitive laboratory on the veranda of a small wattle and daub hut and began the examination of the blood and organs of the animals by bacterialized and other methods. After some days a small, peculiarly shaped body began to make its presence felt on microscopic examination of stained specimens of the blood. In oxen the parasites are very scanty in the blood, so that these bodies were only seen at rare intervals. At first it was thought they were accidental, due to the stain, but after a time their parasitic nature became plain. On examining fresh preparations of blood all doubt was set at rest by the active movement shown by the bodies.

Next blood from an ox containing these active bodies was injected into a dog, and in a few days it was found that the dog's blood was swarming with the same parasites. The question was: "What are these bodies?" At first Colonel Bruce thought they might be filaria, but on turning to Cruikshank's "Bacteriology" the figure of the rat trypanosome showed him he was dealing with a parasite of the same nature. But no one knew that this disease "nagana" was the same as tsetse fly disease. A large mass of evidence on the subject had been collected by the government from magistrates, traders, sportsmen and natives, but nowhere was it stated that "nagana" and tsetse fly disease were one and the same.

In the low country near Ubombo, there was a patch of fly country and Colonel Bruce, being curious to see this interesting

disease, sent healthy animals into this district to be bitten by the fly. Much to his surprise the bitten animals showed the same parasite in the blood, and so it slowly became manifest that the disease "nagana" was nothing more or less than that caused by the tsetse fly, and that the tsetse fly, instead of killing by a self-elaborated poison, really acted as a carrier of a parasite from one animal to another. Colonel Bruce remained at Ubombo for two years working at this disease, the results of which were published by the Royal Society in two papers.

When Colonel Bruce arrived in Uganda, March 16, 1903, to investigate the cause of sleeping sickness, he had no idea he would have again to do with another tsetse fly disease. Nothing could have been more fortunate for the success of the investigations. Up to that time the Portuguese commission and the first commission sent out by the Royal Society had described a streptococcus as the cause of the disease, and not the slightest whisper of a trypanosoma being the cause had been heard. One of the members of the former commission, however, in searching for the streptococcus accidentally had chanced on the trypanosoma on five occasions during his nine months' work in Uganda, and the colonial surgeon at Entebbe had also come across it on several occasions in the blood of natives attending the dispensary for slight ailments.

When Colonel Bruce heard of these observations he put all hands to the work of examining sleeping sickness cases for trypanosomes, with the result that in a few weeks he showed that all cases of sleeping sickness had trypanosomes not only in their cerebrospinal fluid, but also in their blood. He then examined the natives of the sleeping sickness area and found that some 28 per cent. of them harbored the parasite in their blood, whereas in non-sleeping sickness areas not a single native was affected.

Within a few days of reaching Entebbe, he had found that a species of tsetse fly (*Glossina palpalis*) swarmed in the vicinity of Entebbe.

By experiment he showed that this fly could convey the infection of sleeping sickness from the sick to the healthy up to 48 hours after having fed. He also showed that the flies caught in a sleeping sickness area were capable of giving the disease to healthy animals. By the aid of the chiefs he then worked out the distribution of this fly throughout the whole of Uganda and made the curious discovery that the distribution of the fly and that of sleeping sickness were identical.

Therapeutics.

[Our readers are invited to send favorite prescriptions or outlines of treatment, such as have been tried and found useful, for publication in these columns. The writer's name must be attached, but it will be published or omitted as he may prefer. It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns without allusion to inquirer.]

Glandular Tuberculosis.

The following outline of treatment is recommended by *Nord. Med.* in the medicinal treatment of glandular tuberculosis:

B.	Iodi	gr. i	06
	Ext. rhatany	gr. iv	25
	Syr. simplicis	℥iss	45

M. Sig.: One teaspoonful morning and evening.

And the following is recommended to be placed in the bath:

B.	Iodi	℥iiss	10
	Pot. iodidi	℥v	20
	Aquæ	℥viii	240

M. Sig.: To be put into the bath.

Treatment of Sore Throat.

In acute inflammations of the throat in children, N. Filatov, in *Clin. Rev.*, recommends putting the patient to bed and relieving constipation with a laxative such as castor oil or Vienna water. For gargling, a 2 per cent. solution of boric acid or sodium salicylate is of service. If diphtheria is suspected the fauces should be painted with a corrosive sublimate solution (1-1,000), or combined as follows:

B.	Hydrarg. chlorid. corros.	gr. i	06
	Acidi tartarici	gr. viii	50
	Aq. destil.	℥iss	45

M. Sig.: Paint the fauces twice daily.

In diphtheritic sore throat the mouth should be kept clean by rinsing or gargling or steam pulverizations. For the purpose of better diluting the mucus and saliva, alkalies are indicated:

B.	Aq. calcis	℥i	30
	Aq. destil.	℥ii	60

M. Sig.: As a steam pulverization; or:

B.	Sodii bicarb.	℥v	20
	Aquæ destil.	℥iii	90

M. Sig.: To be used as a spray.

In diphtheria associated with fever, turpentine is recommended prescribed with ether to prevent vomiting and mask the taste:

B.	Ol. terebin. gallici	℥i	30
	Spts. etheris sulph.	gtt. xv	1

M. Sig.: One-half a teaspoonful to a dessertspoonful twice a day. If diarrhea appears or stranguary or albuminuria the foregoing will have to be discontinued.

In the treatment of post-diphtheritic paralysis the following is indicated:

B.	Liq. ferri sesquichlor.		
	Glycerini, āā	℥iss	6

M. Sig.: One to ten drops, depending on the age, three times a day after meals.

And besides employing the weak galvanic current, a subcutaneous injection of strychnia is indicated:

B.	Strych. sulph.	gr. ss	03
	Aquæ destil.	℥i	30

M. Sig.: Fifteen drops to be given hypodermically once daily.

In the treatment of ulcerous sore throat, accompanied by yellowish-gray exudation, the following is of service:

B.	Potass. chloratis	ʒss	2
	Aq. destil.	℥iii	90
	Syr. simplicis	ʒss	15

M. Sig.: A teaspoonful to a dessertspoonful every two hours.

Vaginitis.

The following treatment is recommended by *N. Y. and Phil. Med. Jour.* in the treatment of vaginitis:

B.	Salol	gr. xlv-℥ii	3.-8
	Glycerini	℥viii	240

M. Sig.: To be applied locally on a tampon every second day; or:

R.	Acetanilidi	gr. xv	1
	Acidi tannici	gr. viiss	50
	Ext. hydrastis canad.	gr. iv	25
	Sacch. lactis	℥iiss	10
	Ol. theobrom. q. s.		

M. Ft. suppos. No. i. Sig.: One to be inserted every other day.

Calomel in Tuberculosis.

Martell, in *Internat. Med. Mag.*, recommends calomel in the treatment of tuberculosis because of its elective action toward the glands and because of its action on the tissue cells and its power of combining with metabolic toxic products. Its administration is followed from day to day by a progressive increase in the secretion from the lungs and intestines. The doses in the beginning should range from grain 1/6 (.01) to grain 1/3 (.02) three times a day. If constipation is present the dose should be increased until that is relieved and then return to the original dose. The internal administration is to be accompanied by inunctions, each inunction being preceded by a washing of the skin with tincture of green soap. The mouth must be watched, and on the appearance of the least painfulness, it should be washed out with an antiseptic solution.

Within a few days, after this treatment has been started, elimination will be markedly increased from the bowels, kidneys and genitals of women. As a prophylaxis in children with a strong hereditary taint, this treatment should be employed.

The Drug Treatment of Tuberculosis.

In considering the rôle that drugs play in the treatment of tuberculosis, H. E. Stroud, in *Merck's Archives*, considers the preservation of the nutrition of the patient as of first importance. If anorexia rules the patient will die. To create an appetite he recommends the following bitter combination:

℞. Orexin tannatis	gr. xlv	3
Glycerini	ʒi	30
Tinct. gentianæ q. s. ad	ʒii	60

M. Sig.: One teaspoonful before each meal three times a day.

When drugs fail to create an appetite, the author resorts to the starvation method of placing the patient on a single article of food, which he particularly dislikes, for two or four days, at the end of which time he is usually hungry. To increase the nutrition cod-liver oil ranks first, which may be given with iron, arsenic and strychnia to correct the anemia if the stomach is in condition to properly absorb them. The stomach may be kept in condition by lavage, pepsin, hydrochloric acid, etc. The treatment of the cough depends on the stage of the case. In curable cases the opium preparations should be avoided if possible. In advanced cases it is the duty of the physician to relieve the cough, which is the most distressing symptom, no matter how much heroin, dionin, codein, or morphin it may require.

The fever of pure tubercular infection rarely exceeds 100.5 F., otherwise mixed infection is present. There is but one successful plan of reducing the temperature, according to the author, and that is rest in bed and the application of cold water to the hands and face, and, if necessary, the whole body, with an ice bag over the cardiac region. The most certain route to death is being up and about with a tubercular fever.

In the treatment of the fever the use of ergot is strongly condemned. A hypodermic of morphin and atropin should be given at once, and the patient put to bed and the strictest quiet enjoined. Ice may be applied to the chest, also eaten, and if the hemorrhage continues the extremities should be corded at the body just tight enough to check the return flow of venous blood. The cords may be loosened gradually and the blood allowed to flow again. This method lowers the blood pressure, and in the majority of cases checks the hemorrhage. If the hemorrhage comes from too large a vessel it must be ligated, after the plan of J. B. Murphy, of putting the lung to rest by filling the chest cavity with nitrogen gas. Another remedy which is of benefit in checking the hemorrhage is the following combination:

℞. Calcii chloridi		
Glycerini, āā	ʒi	30
Aquæ	Oi	500

M. Sig.: One tablespoonful three or four times a day; or:

℞. Codeinæ	gr. ¼	015
Pulv. adrenalis	gr. iii	20
Calcii chloridi	gr. xv	1

M. Ft. capsula No. i. Sig.: One such capsule three or four times a day.

There is no immediate result from the calcium chlorid, but its effect is more permanent than that of any other drug.

To combat the night sweats the nutrition must be kept up and the cause of the fever removed. As a mechanical measure to be employed before resorting to drugs, three bath towels should be wrung out of cold water and applied to the back and shoulders and chest and covered by dry towels. The patient should sleep in this pack and in the morning they should be removed and the chest rubbed with alcohol. Brilliant results follow this treatment. Of drugs, sage tea, cold, at bedtime, is an old and efficient remedy in mild cases. The following combination is more preferable:

℞. Agaricin	gr. 1/3	02
Zinci oxidi	gr. iii	20

M. Ft. cap. No. i. Sig.: One such capsule at bedtime.

However, no remedy compares with atropin, and if it were not for the drying action of the mouth and throat no other drug would need mention. The author also states that sulphonal in 10-grain doses (.65) at bedtime tends to check the sweating, as well as to induce sleep, which makes it a very important remedy.

The intestine must be cared for and cleared out with calomel, followed by salines or castor oil. The diet should be regulated and intestinal digestion aided by the administration of pancreatin and inspissated ox gall. Fermentation should be controlled by intestinal antiseptics—the best of which is ichthoform, which also checks diarrhea.

To control the diarrhea, which is usually a late symptom, astringents are frequently required. The following combination is recommended by the author as a very efficient one in controlling the diarrhea, which is due primarily to the general toxic condition:

℞. Bismuthi subnit.	ʒvi	24
Ext. coto flu.	ʒi	4
Pulv. cretæ comp.	ʒiii	12
Tinct. opii deod.	ʒiss-iii	6.-12
Pulv. pepsini	ʒi	4
Syr. zingiberis, q. s. ad	ʒiii	90

M. Sig.: Shake and take one teaspoonful after each bowel movement.

In cases where the foregoing fails the following combination is recommended:

℞. Cupri sulph.		
Pulv. opii, āā	gr. i	06

M. Ft. pil. No. i. Sig.: One to three pills daily.

If constipation is present the extract of cascara sagrada combined with aloin and fel bovis is advised.

Medicolegal.

Contract by Expert for Percentage of Judgment Is Invalid.—The Appellate Term of the Supreme Court of New York holds, in the case of Laffin vs. Billington, that a contract by a physician to give expert testimony for the plaintiff in a personal-injury case and to receive as his pay a percentage of any amount realized, is invalid.

Presumption as to Continuance of Mental Unsoundness.—The Supreme Court of Indiana says, in the will case of Branstrator vs. Crow, that it is only when mental unsoundness is of a character to appear permanent, and to forbid the reasonable expectation of recovery, that a presumption of continuance will be indulged. No presumption of any kind will arise from intermittent, temporary unsoundness, such as may result from sickness, injury, intoxication or other transitory cause.

Temporary Derangement of Functions Not a "Disease."—The United States Circuit Court of Appeals, Third Circuit, holds, in Preferred Accident Insurance Co. vs. Muir, that, as used in a provision of a policy which excluded death "resulting wholly or partly, directly or indirectly, . . . from disease in any form, either as a cause or effect," the term "disease" was not intended to cover and did not apply to a temporary derangement of the functions of some organ, as, for example, of the stomach.

Exhibitions of Nervous Affections Before Juries.—The Court of Appeals of New York says that, in the personal-injury case of Clark vs. the Brooklyn Heights Railroad Co., the party suing was allowed by the court to leave the witness stand, assisted, and, at the request of his counsel, to exhibit himself to the jury in the act of writing his name and of taking a drink of water. The record represented him, through the stenographer's notes, as taking a glass of water with both hands, and as spilling the water, through the trembling of his hands, and as using his handkerchief in the same manner. The point of this exhibition was to illustrate or to emphasize his testimony that he could use his hands with difficulty, either to hold things or to drink a glass of water. The injuries received when his wagon and a street car collided consisted in the fracture of two ribs, and in various minor contusions, which did not prevent his leaving the hospital the day after.

He was a man of 57 years of age, and it was his assertion that, about two months after the accident, he was affected by a tremor, or a muscular twitching; and medical testimony was given to that effect, and of tests similar to the one described as made on the trial. He recovered a verdict of $10,000, and the appellate division affirmed the recovery, leaving the only question for the Court of Appeals that arising on the exception of the company to the party being permitted to go through his performances before the jury. It says that it thinks that the court should not have stretched its discretion to such an extent; and that, while it may not have been an abuse of judicial discretion, it was on the borderline of such an error. It is not objectionable, in these cases, that the evidence may go beyond the oral narrative, and may be addressed to the senses, provided that it be kept within reasonable limits by the exercise of a fair judicial discretion. It should be only of a nature to assist the jurors to an understanding of a situation or of an act, or to comprehend objective symptoms resulting from an injury. Examples of this class of evidence are frequent—in the exhibition of the person, and of the marks or obvious evidences of injuries sustained, etc. Personal injuries may be simulated and deception may be practiced in such exhibitions, but that can no more be prevented than can perjury in testimony. When, however, proof is attempted to be made by allowing the plaintiff to act out on a judicial stage before the jurors what he or his physicians have testified to be some nervous affection resulting from an injury, the exhibition is improper, because unfair. As something under the sole control of the witness himself, it is beyond the ordinary tests of examination. Nor does such evidence allow of any record, beyond the reporter's notes of what he saw on the trial. It is intended to prejudice the minds of the jurors, and is calculated to affect the calm judicial atmosphere of a court of justice. The plaintiff in such cases has sufficient advantages without adding to them a spectacular illustration of his symptoms. The appellate division, in its general jurisdiction to review the proceedings on trials, might well have ordered a new trial, in the interests of justice. As it is, this court is compelled to affirm the judgment, with costs, because the matter was discretionary.

Attending Physician May Answer Hypothetical Questions.—The Supreme Court of Iowa says that, when a certain physician was called as a witness in the personal-injury case of Crago vs. the City of Cedar Rapids, the parties agreed that he had been one of the attending physicians of the party suing, and no exception was taken to the exclusion of any testimony by him touching his relations to her as a physician. It was also agreed that the record should stand as if the questions propounded to the other experts had been asked him, and the objections separately interposed. The trial court then sustained the objections. Hypothetical questions, without referring to or disclosing the witness' former employment as her physician, were also held incompetent, under Section 4680 of the Iowa Code, providing that "no practicing . . . physician . . . shall be allowed in giving testimony to disclose any confidential communication properly entrusted to him in his professional capacity and necessary and proper to enable him to discharge the functions of his office according to the usual course of practice or discipline." But no communication, confidential or otherwise, was sought to be elicited, and any intention to attempt this was expressly disclaimed. The questions did not refer thereto, directly or indirectly. Manifestly, then, the Supreme Court says, the statute did not authorize the exclusion of the testimony. The record contained no suggestion of the physician's inability to disassociate the facts stated in the questions from what he had learned from his patient. Indeed, the nature of the inquiry seemed to obviate any such difficulty. If, as counsel argued, the jury might infer from the fact he had treated her; that "he knew more about the case than the experts, and would be likely to give great weight to his evidence," this would not justify the rejection of his testimony, but, rather, indicate the necessity for an instruction directing that no consideration be given to such fact. An unfavorable inference is always to be drawn from the omission of a party to call an available witness to the facts in dispute. The failure of an injured person to examine the attending physician as to the nature and extent of his injuries forms no exception to the rule. This, the Supreme Court thinks, marks the distinction between such physician and others, when testifying as experts in response to purely hypothetical questions. It is legitimate matter for the jury's consideration, and not to be obviated by any rulings of the court. The conclusion reached finds support in People vs. Schuyler, 106 N. Y., 298; Valensin vs. Valensin, 73 Cal., 106. See also Herries vs. City of Waterloo, 114 Iowa, 377. But it was insisted that the ruling was without prejudice, for that three experts were examined, and the testimony, if received, would have been cumulative in character. The Supreme Court answers that the court had not limited the number of experts which might be called on each side. Moreover, the mere fact that evidence is cumulative in character will not justify its exclusion. If evidence is cumulative to other undisputed testimony, its rejection has been held to have been without prejudice. But where there is a sharp conflict in the evidence, as there was in this case, the number or character of the witnesses often control, and the erroneous rejection of the testimony of any can not be held, as a matter of law, to have been without prejudice.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Medical News, New York.

March 5.

1 *The Pathologic Anatomy of Shiga Bacillus Infection of the Intestines in Infants. John Howland.
2 *The Utilization of the Lower Lip in Rhinoplasty. A New Procedure. Carl Beck.
3 A Simple and Inexpensive Rheostat to Use with the Electric Light Current. David T. Marshall.
4 *Traumatic Pyelo-paranephric Cyst. Bern B. Gallaudet.
5 *Ergot in Alcoholism, Morphinism and the General Class of Drug Habit Cases. Alfred T. Livingston.
6 *Suture of the Omentum to the Parietal Peritoneum (Epiplopexy) for Ascites. Joseph H. Branham.

Boston Medical and Surgical Journal.

February 18.

7 *Slipping or Recurrent Dislocation of the Patella. With the Report of Eleven Cases. Joel E. Goldthwait.
8 *Scientific Aspects of Moderate Drinking. Francis G. Benedict.
9 The Use of Obstetric Forceps. Warren R. Gilman.

1. The Shiga Bacillus.—Howland reports the results of autopsies in the New York Foundling Hospital, the Babies' Hospital and the Nursery and Child's Hospital. The Shiga bacillus was proved to be present in the great majority of cases by examination of the stools, but in 7 cases it was obtained postmortem by scraping the mucous membrane of the colon, and in 3 cases was obtained both antemortem and postmortem. All corresponded to the type known as the "acid," "Harris" or "Flexner-Manila" bacillus. It did not ferment glucose, saccharose or lactose, but did split mannite with acid formation. It produced an early acidity in milk with a subsequent alkalinity, and agglutinated with the "Harris" serum in high dilutions. The first 17 cases were winter cases and the last 15, summer cases. There seemed to be no difference in the histologic findings between the two. Four cases are reported in full detail and discussed. The conclusion is that the Shiga bacillus infection has a most diverse pathologic anatomy, and a large percentage of the fatal cases show no evidence of profound structural lesion. The question arises as to how much of the process is to be regarded as due to the Shiga bacillus. The evidence, the author thinks, is in favor of the belief that the primary necrotic lesion is the result of the action of the dysentery bacillus, the subsequent ulceration being brought about probably by the inter-action of various micro-organisms and the ordinary processes of demarcating inflammation. The lesions in the intestines must be considered as of two kinds: 1, Those due to the dysentery bacillus, and 2, those from toxic products of this and perhaps other organisms. He says that in summing up the evidence we shall

have to say that there are comprised under the lesions associated with the Shiga bacillus all grades and types of diarrheal disease as distinguished by clinical symptoms and pathologic findings, and that it can be affirmed that no particular type is distinguished from the others by a special etiology.

2. **Rhinoplasty.**—Beck's method is hard to explain without his diagrams. His technic consisted in cutting a triangular flap, extending from one side of the chin to the lower lip and carrying it upward to form the side of the nose. The results, while not perfect, are decidedly palliative as regards the cosmetic effect. The advantages, he thinks, are in the possibility of supplying throughout the whole area of the defect a mucous membrane which would restore normal conditions as far as possible. The broad wound-surfaces and the fact that the flap need not be larger than the defect because no shrinkage is to be expected, are other points in its favor. In the case reported, the patient had had recurrences of epithelioma. Whether the operation will influence the tendency to recurrence remains to be seen, but he thinks the prospects are more favorable than previously.

4. **Pyelo-Paranephric Cyst.**—In the case reported by Gallaudet, the paranephric part of the cyst was so closely connected with the renal pelvis that there was not only a cavity in common, but also a continuous cyst wall, partly of paranephric tissue and partly of pelvic wall. This condition, he thinks, must be rare, as he does not find it much noticed in the literature. His theory of the case is that: 1. The first traumatism ruptured the pelvis of the kidney and also caused a hematoma, both within the pelvic cavity and within the paranephric tissue; 2, as time went on the blood was gradually absorbed, and the thickened capsule (extrapelvic portion) of connective tissue was formed from paranephric tissue; 3, the opening into the pelvis, however, remained, but the capsule was strong enough to hold any urine that might come through and prevent its extravasation; and 4, a second traumatism caused a fresh hematoma, partly by tearing the inner surface of the capsule and partly by causing small lacerations of the kidney.

5. **Ergot in Drug Habits.**—Livingston advocates his method of using ergot hypodermically in cases of drug habit, and remarks that the objections which have previously existed to this method have been practically remedied by the special efforts of some pharmaceutical houses, who have succeeded in producing a solution of ergot for hypodermic use which does not cause local inflammation when properly injected aseptically. The first step is the complete discontinuance of the use of the narcotic, and insuring that the patient has no access to the drug or any substitute. Within twenty-four to thirty-six hours there will begin in the extreme cases a violent reactionary stage, the basis of which is a dilated state of the blood vessels in the nerve centers, and this may be modified by the action of ergot on their muscular coat. At the same time he gives a mercurial purgative, followed in a few hours by a sufficient saline to assure prompt purgation. This avoids the irritating effect of a loaded bowel on the brain and cord, and prepares the digestive tract for service during the coming ordeal. He also discontinues the ordinary meals, gives abundant fluid and easily digested nourishment every three hours. The best he knows is a paste consisting of the ordinary fluid extract of beef, to which has been added the desiccated and pulverized fibrin. The whites of two eggs dissolved in a glass of cold water, to which a pinch of salt has been added, make another good three-hours' interval meal. He also uses some of the cereal preparations. With the exception of the egg, it is better to give all these liquid foods quite warm or hot. Use no nutritive prepared with alcohol. The bowels should be kept open at least once a day, and better two or three times. He prefers the fluid extract of *Rhamnus frangula* for this purpose, in doses of one or two drams at bedtime and possibly also in the forenoon and afternoon. The frequency of the ergot dosing will depend on the degree of addiction and the general condition of the patient. The larger the daily dosage has been and the greater the nervous prostration, the greater is likely to be the reaction following the discontinuance and the greater should be the effort to counteract it. In general, the range would be from 2 to 3 doses per diem to one every two hours in extreme cases, the dose being .5 dram of his solution or of Squibb's new extract of ergot for hypodermic use—the two being practically the same. The morphin habitués are the hardest to treat. Compared with these the worst of the alcoholic cases is simplicity itself, if ergot is properly used. No matter what the degree of addiction, he would not for a moment consider the plan of "tapering off." He has never had in all his cases a request from the subject for his drug or a substitute after the first forty-eight hours. He says he has been repeatedly asked by a doctor-patient what under the sun he had been giving him, supposing that he had been using a substitute, as the patient had not had an ill feeling. It is desirable to avoid any hypnotic or narcotic drugs in the treatment, and while he is opposed to the "tapering-off" treatment, he admits that there are many excellent physicians who would not persist in the method he employs himself, and suggests a modified plan for their use; that is, to give with two of the hypodermics of ergot, each day, a fractional part of the quantity of morphin or opium that had been daily consumed; one-tenth part will be found sufficient if the ergot is given often enough, and gradually reducing it each succeeding day.

6. **Epiplopexy.**—Branham reports a case of Talma's operation which has these points of interest: 1, Vascular adhesions showing Nature's effort to form a collateral circulation; 2, subsequent pleural effusion with no ascites, indicating that good collateral circulation had been established for the portal system; 3, marked improvement in the patient's general condition, showing a better functioning of the liver and intestinal organs after the operation.

7. **Recurrent Dislocation of the Patella.**—The slipping or recurrent dislocation of the patella is seen almost entirely in girls and women. It is largely due to the fact that the line of pull of the quadriceps is not straight, this feature being increased in its effect by an unnaturally long patellar tendon, knock-knee or imperfectly developed anterior surface at the end of the femur. Goldthwait has treated 11 cases, 7 operative, with 13 operations, and gives the results of his experience here, describing the conditions anatomically and reporting cases. The operation which he performs at present consists in a longitudinal incision four or five inches long, extending from just below the tubercle of the tibia upward. Through this the patellar tendon is exposed and split in halves, anteroposteriorly, throughout its full length. The outer half is then cut from its attachment, passed under the remaining portion and attached to the periosteum, together with the expansion of the tendon of the sartorius at the inner side of the anterior surface of the tibia. If it is desirable to shorten the patellar tendon, the attachment can be made so that the patella is drawn down as much as is required, but this means more tension, and a hole should be drilled in the bone at the point of attachment through which the suture is passed which holds the tendon. The carrying of a piece of tendon under the other is important, as the patella is tilted, the outer portion being drawn downward and presses more firmly on the outer ridge of the articular surface of the femur, so that the danger of slipping is lessened. The attachment is made with strong silk, quilted through the tendon; the wound should be tightly closed and the leg fixed in a plaster-of-paris bandage from ankle to groin, the contraction of the quadriceps extensor being eliminated as much as possible by applying a tight-gauze bandage from the knee to the groin under the plaster. The fixation should be kept up for about six weeks. In this operation the direct pull is continued by a portion of the tendon left undisturbed, so that in case the transplanted portion fails to unite, function is still retained, and some improvement must result, as the simple removal of the outer half of the tendon changes to some extent the direction of the pull. He reports the results, which seem to be fairly satisfactory.

8. **Moderate Drinking.**—Benedict discusses the use of alcohol, and especially the dangers of moderate drinking. He thinks that in any case, while alcohol in small amounts may not produce a change in the tissues, it does retard the physical

and mental growth of youth. The habit-forming tendency must always be regarded.

American Medicine, Philadelphia.

March 5.

10 *Recent Researches in Radioactivity and Electricity. Their Bearing on Radiotherapy. Legal Status. J. Sherman Wight.
11 A Case of Acute Leukemia, with Death Due to Rupture of the Spleen. Joseph L. Miller and Julius Hess.
12 Diphtheria of the Vagina with Secondary Involvement of the Mouth, Rectum and Skin. Thomas W. Salmon.
13 *The Diagnosis and Treatment of Congenital Misplacement of the Hip in Infancy. Albert H. Freiberg.
14 An Original Operation for Complete Laceration of the Female Perineum. C. E. Ristine.
15 *Enuresis. George E. Beilby.
16 Six Months' Work in a Dispensary for Diseases of the Lungs. Thomas H. A. Stites.

10. **Radioactivity.**—Wight's paper is largely a physical and physicochemical explanation of the radiation phenomena, with some therapeutic and medicolegal points mentioned. He has used the effect of high-frequency discharges in skin grafting, and describes the technic as follows: Render the granulating surface sterile; curette it to receive the grafts, and while it is still oozing place the grafts of any form desired in position and bathed in blood. Then apply the high-frequency discharge from a pointed electrode over the entire surface until the clotting is firm and the grafts are fixed on a dry surface. Any serum that is squeezed out in the process of clotting should be sponged off. The dressing is with 3 per cent. carbolized vaselin on plain sterile gauze, and is removed at the end of the third day. The progress of the growth is more rapid than with the ordinary method. Repair was hastened in some cases, in which the secondary Röntgen rays were used at the end of the first week. Six cases are reported. In conclusion, he remarks on the question of the danger of the *x*-ray burns, and refers to some cases. He suggests a blank form, containing all information in regard to the form of apparatus, previous exposure to radiation, distance, time, register of penetration, protection to the adjacent parts, and part exposed. He thinks such a blank filled out by the operator and signed by the patient will be a valuable record of the case and have the force of a waiver in the event of litigation.

13. **Congenital Hip Dislocation.**—Freiberg calls attention to the fact that this dislocation may produce very few symptoms in the first two years of life, but the abnormalities steadily increase during the period that it exists. Shortening to an appreciable extent appears with the development of the weight-bearing function only. When a child begins to learn to walk with limping the diagnosis is easily made. The radiograph, valuable as it is, can not be used with accuracy in determining the progress after reduction. Operation is feasible after the age of one year. The ease and stability of reduction when done early is notable. He says that having discovered that imperfect formation of the hip joint exists before the contact of femur and acetabulum has been markedly disturbed, it should be possible to prevent the further progress of luxation and secure a good joint. This would be accomplished by maintaining the limb in decided abduction, say 25 degrees, during the act of walking. The plaster spica worn for a period of six months in this position should rightly be considered the best means of attaining this end.

15. **Enuresis.**—Beilby has examined some 250 cases in the State Industrial School at Rochester; 75 had been under treatment for this symptom. Only 2 of them were imbeciles. There were in no case marked abnormalities of the urine or signs of vesical or rectal irritation, and in only a few cases was there enough phimosis to be assigned as a cause. He thinks that irritability of the spinal center should be incriminated as a cause in the majority of cases. He also gives great importance to the bad habit of masturbation, and thinks that it is the cause in at least 90 per cent. of all cases among youths and adolescents in institutions. The treatment should be by appealing to the moral sense, improving the physical condition and relieving the congestive or irritative condition of the lumbar cord.

Medical Record, New York.

March 5.

17 *The Treatment of Gunshot Wounds by British Surgeons During the War of the Revolution, 1775-1783. Stephen Smith.
18 *The Rationale of the Natural Arrest of Consumption; a Study Explaining the Effect of Sea Voyages, Outdoor Life, etc., on the Disease, with Suggestions as to Ideal Treatment. W. B. McLaughlin.
19 *Running Ear. A. C. Barden.
20 *Neuralgia Due to Dental Irritation. William J. Lederer.
21 *The Physiology of Hunger. Axel H. Gibson.

17. **Gunshot Wounds.**—Smith gives an interesting review or résumé of a treatise by H. St. John Neale, who was surgeon to a British regiment during th Revolutionary War. Smith points out how in his methods of treatment he was in some respects modern, and had remarkable success in the treatment of gunshot wounds.

18. See abstract in THE JOURNAL of March 5, p. 672.

19. **Running Ear.**—Barden calls attention to the importance of chronic ear suppuration as leading to further complications.

20. **Neuralgia from Dental Irritation.**—The forms of neuralgia which may be due to dental disease are noted by Lederer, who suggests an examination by careful exploration of the teeth, gums and roots as to sensitiveness to heat and cold and the translucency of the tooth by the electric-mouth-lamp, for pulp changes. Each tooth should be carefully percussed to determine the pericemental changes, and tested with an electric current as to its sensitiveness which frequently discloses pulp lesions. Another important measure is to question as to the systemic condition of the patient so as to bring out any predisposing factor. The prognosis of dental neuralgia is favorable unless it is associated with malaria and syphilis, and then it passes out of the hands of the dentist. The systemic condition of the patient should be looked after and properly treated, and the diet regulated, especially in Rigg's disease. If an infection like malaria exists, the exciting cause must, of course, be removed. Neuralgia may be due to injuries in extracting teeth, such as fracture of the alveolus, and this occasionally produces puzzling cases. Foreign bodies in the gums or alveolæ are frequently overlooked, and exostosis or hypercementosis may be the cause, as also impacted teeth. In many cases odontalgia is not a symptom of the malady, but the pain is reflected to another part, and these cases are frequently mal-diagnosed until the condition is properly recognized.

21. **Hunger.**—The principal point made by Gibson is that hunger can be modified by mental effort. If we keep the thoughts and images of food out of our mind the gastric secretion will receive no stimulation and the hunger be kept in abeyance. Keep the mind off the enticing subject and encourage no ideas of gratification.

New York Medical Journal.

March 5.

22 *The New Biologic Test for Human Blood, with a Report of Its Employment in a Recent Murder Case. (To be concluded.) A. Robin.
23 Post-diphtheritic Paralysis of Accommodation, with Report of a Case. Aaron Brav.
24 *Thrombosis of the Jugular Veins in Pulmonary Tuberculosis; with Report of a Case. Charles J. Aldrich.
25 Impressions of the Tuberculosis Exposition at Baltimore. John B. Huber.
26 *Preliminary Report of Bilateral Excision of the Superior and Middle Cervical Sympathetic Ganglia in Five Cases of Epilepsy. S. D. Hopkins.
27 Tertiary Syphilis of the Nose and Pharynx. (Continued.) W. Scott Keener.
28 The Treatment of Paraphimosis. Richard L. Sutton, Z. E. Lewis and John Gilbert.

22. **Biologic Blood Test.**—This portion of Robin's article gives the history of the test and a general review of the literature.

24. **Thrombosis of the Jugular Veins in Tuberculosis.**—The complication of thrombosis of the jugular vein in tuberculosis was noticed many years ago by Lasègue. Since then Aldrich has been able to find only 9 cases in the literature. He adds his own observation, which was that of an advanced case of chronic pulmonary tuberculosis with left internal jugular thrombosis and extension of the thrombus through the subclavian, down the axillary into the basilic veins, and subsequently a similar thrombosis of the other side following a similar course, with terminal cerebral sinus thrombosis by extension. In the epicritical remarks he discusses the bacteriology, suggesting that there may be a clumping of tubercle bacilli from the agglutinating power of tuberculous blood, favoring development of fibrin ferments, but the main cause must lie in

the vessel wall. Of course, it is possible that a general septic condition of the blood in late phthisis may produce a true fermentation thrombosis, but this does not explain the cases occurring early in the disease. Changes in the intima caused by lodgment of specific bacilli or other micro-organisms is what he is inclined to recognize as the cause of the condition; the slowing of the current can have but little effect. Certain anatomic conditions may favor thrombosis and determine the location, thus the sitting posture with dependent limbs accounts for the frequent occurrence of femoral thrombosis in phthisis, and the rather common beginning of thrombosis in the lower end of the jugulars in various heart and lung troubles may be accounted for by the presence of valves in that situation, as suggested by Peter in 1873. Welch speaks of the eddying or whirling motion of the blood set up in this region as having something to do with the cause, and von Recklinghäusen has brought forward strong evidence that this whirling movement is of great importance in determining the localization of thrombi. Aldrich adds that the distressing cough in the late stages of phthisis may also be a potent agent to pouch out the bulb and strain and distend its ill-nourished intima. The sudden aspiration of its contents alternating with the distension is certainly conducive to a vortical motion of the blood. In view of all these facts it is remarkable, he says, that jugular thrombosis is not more commonly associated as a complication of pulmonary phthisis.

26. **Epilepsy.**—Hopkins holds that one of his five cases has gone a sufficient length of time to justify him in considering the patient cured, namely, two years and one month. In the other cases a sufficient length of time has not yet elapsed to say whether or not they are permanently benefited.

St. Louis Medical Review.

March 5.

29 Presentation of Pathologic Specimens: Horseshoe Kidney, Foreign Body in Appendix, Mitral Stenosis, etc. Howard Carter and others.
30 My Autobiography and Reminiscences. (Continued.) S. Pollak.

Cincinnati Lancet-Clinic.

March 5.

31 *Critique of the Usual Clinical Methods for the Quantitative Determination of Sugar in the Urine. J. Henry Schroeder.
32 A Case of Stab Wound of the Pons Varolii. Horace J. Whitacre.
33 Fracture of the Skull. Clarence H. Vaught.

31. **Sugar Tests.**—Schroeder examined critically the fermentation test by the saccharometer, and Roberts' test for specific gravity and the quantitative test by means of Fehling's solution. He concludes that the fermentation tests, with properly constructed instruments, give good results, and as they do not require previous purification of the urine, they are peculiarly adapted to the needs of the physician. The Einhorn fermentation saccharometer gives constant and satisfactory results when properly constructed, and when comparative tests are made at a temperature of from 65 to 75 F., and the sugar strength is within the limits of the instrument. To avoid loss of time from miscalculation in diluting the urine, two different dilutions should be tested at the same time, one serving as a control of the other. In view of these satisfactory reactions we need not lay too much stress on Fehling's solution.

Proceedings of the Pathological Society of Philadelphia.

December.

34 *The Development of Hemolymph Nodes in Adipose Tissue. Aldred S. Warthin.
35 *Demonstration on Cryoscopy. Henry W. Cattell.
36 *Pseudoparasitism Caused by the Common Clothes Moth. Joseph McFarland.

34. See editorial in THE JOURNAL, March 5, 1904, p. 652.

35. **Cryoscopy.**—Cryoscopy, according to Cattell, has a valuable though somewhat limited use among laboratory methods. It is easily applied and the apparatus is portable. Repeated cryoscopic examination of the urine taken in connection with that of the blood affords a valuable means of determining the renal sufficiency, but it should be supplemented in doubtful cases by electric conductibility, the phloridzin, dilution and other laboratory tests. It may be employed as a quantitative method for the determination of such abnormal constituents of the urine as sugar, and as a qualitative test for the presence of beta-oxybutyric acid in the urine, formalin in milk, etc. The relation of the specific gravity in health to cryoscopy is quite constant. In disease it varies much according to the conditions, the drugs taken, the temperature, the amount of sodium chlorid in the urine, etc. There is a personal equation in performing this test, which should always be determined by the testing of distilled water with the conditions to be used in the experiment and correcting the error, whatever it may be. The cryoscopic index of human blood is quite constant, —0.56 C., that of the fetus being slightly less, while the index of twenty-four hours' urine varies from —0.8 to —0.2 C. in health. Cryoscopic observations may be an important corroborative test in medicolegal cases, as in drowning and in differentiating the blood of different animals.

36. **Pseudoparasitism.**—McFarland reports a case where a common clothes moth, which has a naked caterpillar, led to the diagnosis of parasites in the intestine. It had dropped from the mattress, which was badly infested with these moths. While pondering on the first mistaken diagnosis, he became impressed with the possible danger from the breakfast cereals which are eaten raw should insect larvæ infest them.

The Therapeutic Gazette, Detroit.

February 15.

37 *Practical Lessons from an Experience of More Than One Hundred Cases of Eclampsia. Barton Cooke Hirst.
38 *Surgical Treatment of Recent Fractures of the Patella. Edward Martin and T. T. Thomas.
39 *Dionin.—A New Agent in Ophthalmic Therapeutics. Wendell Reber.
40 *The Treatment of Astereognosis by Re-education. Charles W. Burr.
41 *The Gradual Restriction Method of Cure in Morphia, Cocain and Other Drug Addictions. S. Ormond Goldan.
42 Cholelithiasis, with a Report of Two Cases. John B. Shober.

37. **Eclampsia.**—Hirst holds to the nephritic origin of eclampsia, and does not believe in too rapid evacuation of the uterus and not at all in cesarean section. He would rather produce labor slowly than resort to a forced delivery, employing the elimination treatment by diuresis, catharsis and diaphoresis, which should be actively employed. For convulsions, we must eliminate the poison and quiet the nervous irritability. It is generally agreed that normal salt injections, sweats and purgation are the most reliable eliminants. Venesection may be classed among these, but he rarely uses it now. Of the sedatives, chloral and opium dispute the field. He thinks the latter intereferes with elimination, and a large dose may cause fatal poisoning in view of the inactivity of the kidneys. For the relief of arterial tension he would use veratrum viride. He closes by recommending hospital treatment for such cases.

38. **Fractured Patella.**—The summary of the treatment of this accident is given by Martin and Thomas as follows:

1. The conservative treatment of fracture of the patella is applicable to blow or tear fractures in which the separation of the fragments is not greater than one-half inch when the knee is flexed to a right angle, and in which there is no great joint tension. Conservative treatment consists in fixation for ten days, the application of adhesive strips to approximate the fragments, the use of elastic bandages to prevent inflammatory exudation, and the employment of massage and passive movements. 2. All fractures of the patella, independent of the amount of fragment separation, attended by marked and immediate joint tension, should be treated by the open method. 3. All fractures of the patella in which the fragments are separated more than one-half inch when the knee is bent to a right angle should be treated by the open method; the torn tendinous expansions of the quadriceps being closed by mattress suture, and the patellar fragments being united by silver wire, the insertion of the latter being facilitated by the use of a bone drill with an eye in its boring end.

The article is illustrated by skiagrams and drawings.

39. **Dionin.**—This remedy is highly spoken of by Reber, who holds that it has properties possessed by no other drug. It is an analgesic of value, relieving the pain of iritis where atropin fails. It enhances the value of atropin, and is a powerful dilator and lymphagogue in the eye. If used to the point of distinct reaction, it promotes the absorption of exudation deposits on the anterior capsule in the pupillary space, and also helps the absorption of post-operative débris after cataract. It certainly does help to clear up corneal opacities in some cases of interstitial keratitis, but is ineffective in all other forms. Its effect on glaucoma is unsettled. He thinks it

should be widely used and the results reported, so that we may have a thoroughly correct estimate of its value.

40. Astereognosis.—The method of treatment for this condition as recommended by Burr is educational, based on the idea Frenkel utilized in the treatment of ataxia. He holds that the sensory cortical cells may be diseased so as to have lost the impression of previous sensory stimuli, yet be normal enough to take and preserve new impressions, and that the neighboring cells may take on the function of those destroyed. He therefore recommends the simple method of re-educating the patient by handling and feeling different objects to determine the size, weight and texture. The treatment should be persisted in for weeks and months, but if there is no improvement after a daily quarter of an hour lesson for a month, it is hardly worth while continuing the treatment. He thinks, however, the treatment promises well in many cases.

41. Drug Addictions.—Goldan believes in hyoscin hydrobromate as a true specific in drug addictions, given in small dose, as the other drug is withdrawn as rapidly as circumstances will permit, giving a larger quantity at night. It is rarely necessary to give over 1/100 of a grain, and the beginning dose should be smaller. The elimination function should also be stimulated at the same time and gastric lavage employed. The neurasthenia should be treated afterward. A valuable remedy is glycerophosphate, given preferably hypodermically.

Colorado Medicine, Denver.

February.

42 *Shall We Abandon the Use of Antitoxin? F. E. Waxham.
43 *Therapeutics of Whooping Cough. J. Tracy Melvin.
44 *The Results of X-ray Treatment. Samuel B. Childs.
45 *The Rectal Syphon. R. W. Corwin.
47 *A Treatment of Tubercular Ulcerations of the Rectum and Peri-anal Region. D. P. Mayhew.
48 Puerperal Infection. Clarence L. Wheaton.

43. Diphtheria Antitoxin.—Waxham reviews the statistics of antitoxin, pointing out the benefits, but reports two cases, occurring within his knowledge, of death after the injections. He does not attribute the deaths to the injection entirely, but partly to nervous shock and possibly also to other medication. In one case the injection may have entered the vein and to some extent can be considered the cause of death. These instances, however, he holds do not outbalance the advantages. The life-saving power of antitoxin can hardly be overestimated.

44. Whooping Cough.—Melvin uses atropin to palliate the symptoms in older children and in small children and infants depends on crude carbolic acid vaporized from a heated surface. He uses formaldehyd in the same way at night, and in the day when practicable, with older patients. He thinks the severity of the symptoms are relieved and the attack shortened in the majority of cases without serious discomfort to the patient by these means.

45. The X-Rays.—The therapeutic effects of the *x*-rays are discussed by Childs in a number of diseases, and he reports his experience. He thinks in superficial malignant growths this treatment has the advantage of leaving the smallest scar, and is also useful in many local disorders, like acne, rosacea and psoriasis that are resistant to other treatment. The results in tubercular glands are also encouraging, and the large masses of glands in Hodgkin's disease appear to be susceptible to this treatment. The *x*-rays should not be used in any operable deep malignant growths, except where a surgical operation would sacrifice an extremity, or perhaps, as suggested by Pusey, with a view to limiting the operation by checking the growth if operation at once is not considered advisable. The rays are useful even in inoperable growths as a palliative, and they should be used in all cases after operation as a prophylactic against recurrence. The area of exposure should be wide and the intensity and quality of the rays should be adapted to each case.

46. The Rectal Siphon.—Corwin suggests the use of a tube used somewhat like the stomach tube, to be employed in siphoning out the bowels and to aid Nature where it is required. The rectal siphon overcomes the difficulty and suffering when the pelvic organs are inflamed, and of forcing a movement of the bowels when in a horizontal position.

47. Tubercular Ulcerations of the Rectum.—The treatment here recommended by Mayhew is to paint the ulcer with a saturated solution of trichloracetic acid, care being taken not to allow it to spread over the healthy tissue. This is repeated the next day, and after waiting a few minutes for the acid to act, the pellicle of tissue which has been destroyed is removed with a curette. No anesthesia is required. This is repeated, if necessary, until the shining fibrous layer underlying the ulcer is reached. The overlying edges are destroyed by the acid, and at the next séance will be found to have disappeared. In this way the tissue can be removed without destroying the barrier Nature has set up. An ulcer thus cleaned is dusted with some iodin-containing powder, and, if external to the anus, is covered with a dry pad well dusted with the same powder. The patient should be seen every other day, and at the next visit it will often be seen that the floor of the ulcer is covered with healthy granulations, and the mucous membrane or the skin encroaching to cover the edges. In this case the acid need not be repeated. Simple painting with Lugol's solution and dusting with an iodin powder is all that is required. As often, however, as the ulcer looks unhealthy and the granulations show signs of breaking down, the acid and the curette should be employed. If the ulceration is within the rectum the treatment should be supplemented by treatment of the rectal mucosa, which is generally catarrhal. He uses for this the fluid extract of krameria twice daily in the proportion of 1 and 1½ ounces to the pint of hot water followed by a dram of a 5 to 10 per cent. solution of protargol, which is to be retained. In this way the ulcer is converted into a simple ulcer and there may be some pain, but this, as a rule, is a good sign. He reports several cases.

American Journal of Insanity, Baltimore.

January.

49 *The Anatomical Facts and Clinical Varieties of Traumatic Insanity. Adolf Meyer.
50 Apparent Recovery in a Case of Paranoia. Richard Dewey.
51 *Notes on Malignant Growths in the Insane. John R. Knapp.
52 A Report of a Case of Myoclonus Epilepsy. Irwin H. Neff.
53 *The Present Status of Paranoia. William McDonald.
54 *Korsakoff's Psychosis.—Report of Cases. Harry W. Miller.
55 Paranoid Dementia. C. W. Page.

49. Traumatic Insanity.—Meyer reviews the general subject of traumatic insanity, including all the various types, and offers the following classification:

1. The direct post-traumatic delliria with the following subdivisions: *a*, Pre-eminently febrile reactions; *b*, the delirium nervosum of Dupuytren, not differing from delliria after operations, injuries, etc.; *c*, the delirium of ulcer solution of coma with or without alcoholic basis; *d*, forms of protracted delliria usually with numerous fabulations, etc. (with or without alcoholic or senile basis). 2. The post-traumatic constitution: *a*, Types with mere facilitation of reaction to alcohol, grippe, etc.; *b*, types with vasomotor neurosis; *c*, types with explosive diathesis; *d*, types with hysteroid or epileptoid episodes with or without convulsions (such as most reflex-psychoses); *e*, types of paranoiac development. 3. The traumatic defect conditions: *a*, Primary defects allied to aphasia; *b*, secondary deterioration in connection with epilepsy; *c*, terminal deterioration due to progressive alterations of the primarily injured parts, with or without arteriosclerosis. 4. Psychoses in which trauma is merely a contributory factor: *a*, General paralysis with or without traumatic stigmata; *b*, manic-depressive and other transitory psychoses, catatonic deterioration and paranoiac conditions, with or without traumatic stigmata. 5. Traumatic psychoses from injury not directly affecting the head.

The outcome has not been so unfavorable in his cases as Guder's statistics show, though the time is too short to settle the question. Aside from what is indicated symptomatically, the possibilities of therapeutic interference are not very great. In any case depression of the skull should be looked for, and also clots even where no injury is noticeable. Where no indications for operation are present the avoidance of alcohol and irritating factors is of decided importance.

51. Malignant Growths in the Insane.—Knapp has analyzed the cases occurring in the Manhattan State Hospital, east, and finds that one patient out of every 626 under treatment died from malignant growth, and of every 217 deaths one death was from this cause, a much larger proportion than is shown in the general population. Short detailed descriptions are given of some of the cases. He suggests that failing inhibition in the insane favors the morbid process, and he thinks that a systematic study of malignant growths in mental dis-

orders might be a valuable help in elucidating the general question of their origin and pathology.

53. **Paranoia.**—McDonald reviews the various forms of paranoia, so-called, and concludes that a large proportion of those so classed must fall into one of the subdivisions of the type of dementia precox. In these cases there is more or less mental impairment and hallucination. The delusions are not really systematized or fixed, and the incoherence of thought is evident in the spoken or written expressions. There is a class of patients in which the paranoid delusions occur in the natural course of development and because of defective organization. These are the original paranoiacs of some authors. There is also a paranoid form of alcoholic insanity. Though paranoid symptoms occur often in senile dementia, in paresis, in manic-depressive insanity and in melancholia, the characteristic stigmata of these forms of mental disorder will aid in the diagnosis. A study of all the patients, old records and classical cases in the literature has thus far failed to present to him a case that could not be classified better in some other type than be called pure paranoia. He, therefore, apparently rejects paranoia as a distinct entity among mental disorders.

54. **Korsakoff's Psychosis.**—Miller's paper is an interesting summary of facts, and a review of the literature with a report of a number of cases of this particular form of mental disease.

American Journal of Obstetrics, New York.

February.

56 *The Etiology of the Ischuria in Retroflexion of the Gravid Uterus. Charles B. Reed.
57 Some Suggestions That Should Be Given the Young Primipara Before and After Parturition. George W. Cook.
58 *Shall a Pseudo-hermaphrodite Be Allowed to Decide to Which Sex He or She Shall Belong? Fred J. Taussig.
59 A Contribution to the Function of the Corpus Luteum. Emil Riss.
60 *Further Remarks on Gonorrhea: Its Complications and Our Responsibility in Authorizing Matrimony. Joseph T. Johnson.
61 Statistical Notes on Causes of Salpingitis. Frank T. Andrews.
62 Infravaginal Elongation of the Cervix. Marcus Rosenwasser.
63 *Modified Porro Operation. Carl Wagner.
64 Pelvic Cellulitis. R. P. McReynolds.
65 *Tuberculosis of the Female Genitalia and Peritoneum. (Concluded.) John B. Murphy.

56. **Ischuria in Retroflexion of the Gravid Uterus.**—Reed has studied this subject thoroughly, and concludes that the retention of urine in retroflexio-version is not due to direct compression of the urethra or bladder neck, mechanically closing the lumen, but must be regarded as a sort of "pressure paralysis" due to interference with the nerves supplying the bladder. Compression of the principal motor nerve is the most common cause. The part most subject to pressure is the pelvic ganglion of the uterus, though the nerve may be affected in any part of its course. Compression of the sensory nerves may rarely produce retention. Both afferent and efferent filaments may be affected simultaneously, but the order is usually consecutive. Pathologic conditions of the pelvis and abdomen irritating the sensory fibers of the bladder cause the so-called "irritable bladder." The retention of urine postpartum and after laparotomy for tumors is due to diminished intra-abdominal pressure, weakness of the abdominal muscles from over distention and the dorsal decubitus.

58. **Pseudohermaphroditism.**—Taussig concludes that we must in dubious cases do one of two things: either wait until the twenty-fifth or thirtieth year for the appearance of some sign, such as menstruation or the descent of the testicle, or perform a diagnostic laparotomy to determine the sex. After the sex has been thus determined in one or the other way then the external plastic operations that are asked for can be safely performed.

60. **Gonorrhea.**—Johnson thinks that the subject of gonorrhea is of the greatest importance, and that a very large proportion of men, even 90 per cent. according to his own observation, acquire the disease. The results in serious pelvic complications in women and the great number of abdominal sections required in their treatment, the dangers of puerperal infection and of ophthalmia neonatorum and the complications following gonorrheal infection in men are matters serious enough to call for the close attention of the physician and make him feel his responsibility in advising men who have been treated for gonorrhea as to the matter of marriage.

63. **Modified Porro Operation.**—The modified method here described by Wagner consists in grasping the cervical portion of the uterus, then inserting four forceps around the circumference so as to furnish a line for the incision and also for lifting the stump after amputation. Holding the scissors in a slanting position, he amputates the uterus with a few heavy strokes, while the moment it is opened the assistant introduces a finger to hold back the head and membranes. By holding the scissors slanting, the outer blade higher than the inner, and keeping the blade inside the uterus in contact with the mucous membrane, he avoids injury to the head and membranes, and has a conically formed stump, which allows very easy adaptation. The whole procedure in his hands only took one minute, which is a great advantage for the chance of life of the child, and was absolutely bloodless. In the case reported the patient made an uneventful recovery and left the hospital in twenty days. This modification of Porro's operation has proven in his hands safer and easier than the statistics of the ordinary Porro operation show, with a minimum consumption of time and loss of blood.

65. **Genital Tuberculosis.**—Murphy here finishes his elaborate monograph on tuberculosis of the female genitalia and peritoneum. It is too elaborate to summarize in the space we could devote to it.

Archives of Pediatrics, New York.

February.

66 *A Study of 337 Cases of Enteric Fever in Children. Samuel S. Adams.
67 *A Study of the Condition of the Upper Air Passages Before and After Intubation of the Larynx. Also, an Inquiry Into the Method of Feeding Employed in the Cases. Louis Fischer.
68 Diastasis of the Recti Muscles in Rickets with the Report of a Marked Example in an Infant. Albert P. Francine.
69 Subphrenic Abscess in Children. John H. Jopson.

66. **Enteric Fever in Children.**—Adams analyzes and tabulates 337 cases of enteric fever in children, and notes the peculiarities. The greatest difficulty in the diagnosis was to differentiate it from estivo-autumnal malaria when the blood examination was negative. Observation and repeated blood examinations settled the question, however. The Widal test was applied in 70 cases, and gave a positive result in 86.8 per cent. The total mortality was 48, or a ratio of 14.2 per cent., but according to the periods and changes in the treatment it has been steadily decreasing so that in the last period from 1899, during which the purely hydrotherapeutic treatment has been employed, the mortality of 164 cases thus treated is only 10.97 per cent. Excluding the four cases that died of pulmonary tuberculosis during or after the fever, it would be only 8.54 per cent.

67. **Intubation.**—Fischer finds from a study of a series of children intubated in the Willard Hospital and another series taken from private practice, that intubation produces no chronic cough; that the larynx was markedly tolerant, one of his cases having worn the tube for twenty-six days, and another twenty-five; that a proper feeding tube composed of rubber leaves no evidence of chronic inflammation directly traceable to it. There was no change in the contour of the thorax from intubation, although in the majority of the children in the first series as well as in the second there was decided rachitis, and 90 per cent. of the first series suffered from some form of chronic throat disease, such as tonsillar hypertrophy, adenoids or chronic pharyngitis, or all of them together. He thinks that it is safe to assume that these conditions invite the infection. If children's throats are in a normal condition the risk of infection is reduced to a minimum.

Maryland Medical Journal, Baltimore.

February.

70 Remarks on the Occasion of the Opening of the Tuberculosis Exposition in Baltimore, Jan. 25, 1904. William S. Thayer.
71 *The Statistical Laws of Tuberculosis. Frederick L. Hoffman.
72 *House Infection of Tuberculosis. Lawrence F. Flick.
73 *Bovine Tuberculosis a Factor in the Causation of Human Tuberculosis. Maxyck P. Ravenel.
74 *Some Observations on the Tuberculosis of Animals. D. E. Salmon.

71, 72, 73.—See abstract in THE JOURNAL of February 6, p. 391.

74. **Tuberculosis of Animals.**—This subject is taken up by Salmon, who specifies the different types of tubercle in different species of animals, and concludes that infection of the human subject from the lower animals is established by scientific facts. Almost all the cases with bacilli of the bovine type have been in children, which is noteworthy, and each of these forms a new center of infection. These bacilli may be the means of keeping up the disease in the human species. The human organism seems to have the power of attenuating tubercle bacilli and gradually making them less and less harmful, but this is counteracted by the infusion of pathogenic germs from animal sources.

Clinical Review, Chicago.
March.

75 *Hypochlorhydria Nervosa. William H. Washburn.
76 The Diagnosis of Febrile Diseases of Childhood: Typhoid, Relapsing Fever and Acute Miliary Tuberculosis. N. Filatov.

75. **Hypochlorhydria Nervosa.**—Washburn calls attention to and reports cases of a condition of decreased HCl in the gastric juice secretion from nervous causes. In all cases the striking features were the reduced amount of hydrochloric acid and the obtrusive nervous symptoms. The treatment indicated was the increasing of hydrochloric acid directly, and it was given in 15 to 20 drop doses, well diluted, half an hour after each meal and a second dose another half hour later, in each case relieving the symptoms remarkably. This treatment was supplemented by a tonic pill and treatment to keep the bowels in good order and general hygienic directions. In all cases the urine was found normal.

Iowa Medical Journal, Des Moines.
February 15.

77 Gumma of the Penis. C. A. Bolce.
78 *A Burning Speech. H. W. Bailey.
79 Impression of the Rotunda. Harold Bailey.
80 Therapeutic Uses of the X-ray. M. G. Sloan.
81 Alarming Nasal Hemorrhage. H. Borst.
82 Surgical Treatment of Injuries to Spinal Cord. L. Schooler.
83 Proposed Sanatorium for Consumptives. W. B. La Force.

78. **Cremation.**—The dangers of earth burial are emphasized very strongly by Bailey, who advocates cremation. As an example of the dangers he mentions that of the tetanus germ being continuously in the ground, and the anthrax experience with buried animals. He asserts that the modern methods of burial in tight coffins are unsanitary as not favoring the resolution of the body to its original elements in the soil in time and as favoring the growth of malignant germs.

Medical Age, Detroit.
February 25.

84 The Jewish Dietary Laws from a Scientific Standpoint. N. E. Aronstam.
85 A Case of Exophthalmic Goiter. R. J. Ward.
86 Report of a Case of Severe Anemia Secondary to Puerperal Sepsis, Accompanied with Multiple Neuritis. Henry C. Sanders.

American Practitioner and News, Louisville.
February 1.

87 Some Phases of Bright's Disease. A. G. Bilancoe.
88 Adenoid Anesthesia. Hugh N. Leavell.

Pennsylvania Medical Journal, Pittsburg.
February.

89 Address in Ophthalmology. Medical Society of the State of Pennsylvania. Edward H. Heckel.
90 *Is Registration and Disinfection a Successful Method of Combating Pulmonary Consumption? Thomas J. Mays.
91 The Prevention of Tuberculosis. Lawrence F. Flick.
92 *The Specific Treatment of Tuberculosis. Masyck P. Ravenel.
93 *Traumatism—An Etiologic Factor in Phthisis Pulmonalis. W. T. English.
94 Report of a Case of Elephantiasis. The Hypodermic Use of Camphor. J. I. Johnston.
95 *Some Random Notes on Diseases of the Rectum. Lewis H. Adler, Jr.
96 Obstetric Experiences of a Country Physician. H. C. McKinley.
97 Three Unusual Vesical Cases, with Operation. Ella B. Everitt.
98 *Inflammation of the Middle Ear in Diseases of Children. Theodore J. Elterich.

90, 92, 93.—See abstracts in THE JOURNAL, xli, p. 1039.

95. **Proctology.**—Adler pleads for the specialist. He thinks that much harm has been done by rough and unskilled handling in the treatment of anal and rectal troubles, and the quacks have profited accordingly. He calls attention to their methods, a knowledge of which is sometimes profitable to the physician, not for imitation, but for suggestions and warnings.

98.—See abstract in THE JOURNAL, xli, p. 1104.

St. Paul Medical Journal.
March.

99 *An Analysis of Thirty Cases of Appendicitis. L. F. Schmauss.
100 *Epileptic Automatism. Arthur Sweeney.
101 Some Orthopedic Suggestions to the General Practitioner; Chronic Osteitis—Its Diagnosis and Treatment. John Carpenter Schappa.
102 Pulmonary Tuberculosis, with Special Reference to "The Open Air Treatment." H. E. Stroud.
103 The Tuberculosis Question in Minnesota. H. Longstreet Taylor.
104 Scarlet Fever. Emery H. Bayley.

99. **Appendicitis.**—Schmauss considers that the operation for this condition requires more than the average skill, and not every physician can handle it safely. Complicated cases require the experienced surgeon. The large mortality from appendicitis, he thinks, is due to the "wait and see" policy and incomplete operations, faulty technic or after-treatment. More lives have been sacrificed by the policy of postponing than by other causes, and the interval operation has a higher mortality than it is credited with. In mild cases we should not wait for the interval operation. He thinks Ochsner's treatment is a great advance, but does not agree with him in that circumscribed abscess is comparatively harmless or that we should let perityphlitis go to abscess formation. In the diagnosis, leucocytosis ought to help us in determining whether there is an abscess. Frequently a single symptom may require operation, such as severe pain, rigidity, etc. The teaching to operate immediately or wait until the interval are both of them misleading; the local and general conditions of every case will have to be considered. He suggests the advisability of operation in all primary cases, but does not urge it, or even recommend it, excepting in cases of considerable severity or of necessity. He believes in the timely operation in all recurring cases, and immediate operation in all severe cases. While there is some risk from moving, still it is better to transport the patient to a place where he can be properly operated on than to leave him in unfavorable surroundings. Good medical treatment under unfavorable conditions for operation is better than poor surgical treatment. There is no telling what the next attack is going to be from the character of the previous one. Schmauss favors drainage in septic cases, and believes that the removal of the appendix is advisable. In conclusion he remarks on the defectiveness of statistics, and the need of more efficient clinical, anatomic and pathologic classification.

100. **Epileptic Automatism.**—Some interesting cases of double consciousness or epileptic automatism are reported by Sweeney, who considers that unconsciousness should be the criterion of epilepsy. The consciousness is affected in various degrees and for various periods of time, from the profund absence in motor epilepsy to the momentary hiatus of petit mal. All the functions of the brain may be involved or only a single one. The faculty which is constantly absent in epilepsy is that of conscious memory, while organic memory flourishes in nearly full perfection.

Mississippi Medical Record, Vicksburg.
March.

105 Some Eye Complications Seen in General Diseases. M. H. Bell.
106 Three Cases of Scarlatina. S. W. Johnston.
107 Coughs and Colds. William F. Waugh.

Louisville Monthly Journal of Medicine and Surgery.
March.

108 Intestinal Obstruction Due to Gallstones with a Report of a Case. W. O. Roberts.
108½ The Sarcomata. W. R. Blue.
109 Acromegalia, Report of Case. R. Alexander Bate.
110 Croupous Pneumonia. F. C. Simpson.
111 Headache. D. L. Field.

Toledo Medical and Surgical Reporter.
March.

112 Stricture of the Urethra. C. M. Harpster.
113 Intubation in Membranous Croup. John North.
114 A Few Remarks Concerning the Treatment of Menstrual Irregularities. M. Luther Spriggs.

Mobile Medical and Surgical Journal.
February.

115 Remarks on the Subject of Abortion. J. C. McLeod.
116 Pneumonia. P. J. Glass.
117 Carcinoma of the Uterus. J. B. Killebrew.
118 Appendicitis. H. T. Inge.

Southern California Practitioner, Los Angeles.
February.

119 Race Conservation. Rose Talbott Bullard.
120 The Acid Fast Bacilli. W. W. Robiee.
121 Finsen Rays. Albert Solland.
122 Clinical Lecture on Leprosy. Granville MacGowan.

Occidental Medical Times, San Francisco.
February.

123 Some Points on Nursing Ethics. George B. Somers.
124 Surgical Treatment of Chronic Bright's Disease. William R. Derr.
125 Radium. D. A. Stapler.
126 Treatment of Chronic Nephritis; Report of a Unique Case. Wm. Himmelsbach.
127 Cerebral and Spinal Syphilis with Pronounced Acute Bulbar Paralysis. E. O. Jellinek.

Wisconsin Medical Journal, Milwaukee.
February.

128 Strangulated Hernia. Philip R. Fox.
129 Syphilis Hereditaria Tarda. Isaac A. Abt.
130 The Practice of Obstetrics. E. F. Fish.
131 Septal Deflections. Their Consequence and Treatment. F. T. Nye.
132 An Interesting Case of Nasal Deformity Corrected by the "Paraffin Method." Henry B. Hitz.

Medical and Surgical Monitor, Indianapolis.
February 15.

133 *Necessity for the Annual Systematic Examination of School Children's Eyes, Ears, Noses and Throats by School Teachers. Frank Allport.
134 Epistaxis and its Treatment. L. D. Bruce.
135 Physiologic and Psychologic Impotency. W. P. Ford.
136 Therapeutic Application of Benzosol (Guaiacol Benzoate). J. W. Wainwright.
137 Cataract Operation. Late Infection. Recovery. F. C. Heath.

133.—See THE JOURNAL of March 12, title 40, p. 703.

Southern Practitioner, Nashville.
March.

138 *Memorial Address on Dr. W. E. B. Davis. Richard Douglas.
139 Urinary Cysts. Wm. Litterer.

138.—This address has been published elsewhere. See THE JOURNAL of March 12, title 94, p. 739.

Texas Medical News, Austin.
February.

140 Bronchial Asthma. W. G. Pettus.
141 The Responsibility of the United States Government for the Sanitary Condition of Neighbor Nations. J. W. Carhart.
142 The General Therapeutics of Inflammation. O. L. Williams.
144 Report of a Case of Ectopic Pregnancy. Charles C. Barrell.

Medical Herald, St. Joseph, Mo.
February.

145 Stone in the Bladder and Hypertrophy of the Prostate Treated by Suprapubic Lithotomy and Prostatectomy. Reginald Harrison.
146 Surgical Cleanliness. Charles C. Miller.
147 Acute Intestinal Obstruction. O. Beverly Campbell.
148 Constipation. E. B. La Fevre.
149 Validol, its Pharmacology and Therapeutics. M. Klonk.

Journal of the Kansas Medical Society, Topeka.
February.

150 What Is Insanity in Lower Animals? L. E. Sayre.
151 Syphilis. Mayer Shayer.
152 Carcinoma Ventriculi. George Howard Hoxie.

Medical Sentinel, Portland, Ore.
February.

153 Adenoids. Adolph Blitz.
154 Non-operative Treatment of Retrodeviations of the Uterus. Edna D. Timms.
155 Retrodeviations of the Uterus, Etiology. Mae H. Cardwell.
156 Symptoms of Retrodeviations. Amelia Ziegler.
157 Practical Therapeutics in Eye Diseases. (Continued.) Jno. D. Donovan.
158 Goiter in Washington. Thomas W. Musgrove.

Medical Summary, Philadelphia.
February.

159 Tonsillitis. G. O. Smith.
160 General Anesthesia. Charles C. Miller.
161 Treatment of Hemorrhoids. J. A. Burnett.
162 Consumption a Curable Disease. N. B. Shade.
163 The Adulteration of Drugs and Food. C. W. Canan.
164 "Ur-a-sol" and its Uses. W. Harper Sloan.
165 Neglect in Heart Disease. C. E. Boynton.
166 Marriage and Celibacy. J. L. Wolfe.
167 Club-foot. Frank R. Brunner.
168 Quackery and the Remedy.

Journal of the Association of Military Surgeons, Carlisle, Pa.
March.

169 On the Prevention of the Spread of Infectious Diseases on Board Ship. Henry G. Beyer.
170 The Expansion of the Hospital Corps in War. George B. Bushnell.
171 The United States Navy Transportation Board—1903 Model.
172 The Results of Two Seasons' Anti-malaria Work. Frederick F. Russell.
173 My First Aid to the Wounded. The Trip of the Steamer S. R. Spaulding Transporting Our Wounded Prisoners from City Point, Va., to Philadelphia, After the Seven Days Battles in 1862. Henry O. Marcy.
174 The Differential Diagnosis of Typhoid Fever in Its Earliest Stages. (Esno Sander Prize Essay, 1903). Frederick Smith.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London.
February 27.

1 *A Criticism on the Value of Hammerschlag's Method in Clinical Estimations of the Specific Gravity of the Blood. E. P. Baumann.
2 *Remarks on Temperature. M. S. Pembrey.
3 *The Causes and Treatment of Chronic Rheumatism. Ralph Stockman.
4 *A Case of Scurvy in an Infant Fed on "Humanised" Sterilised Milk. Henry Ashby.
5 *Some Notes on the Urine in Beri-beri. Herbert E. Durham.
6 Mycosis Fungoides, or Albert's Disease. John Reid.
7 Injuries to the Eyes in Relation to the Workmen's Compensation Act. Jameson Evans.
8 *On Removal of the Crystalline Lens in High Degrees of Myopia, as Illustrated in Sixty Cases. Simeon Snell.

1. Specific Gravity of the Blood.—Of the methods of determining the specific gravity of the blood, the pycnometer is the most exact. Some methods such as that with the Schmaltz capillary pycnometer are inexact or too laborious, but Hammerschlag's method, Baumann asserts, is well adapted to the clinical practice. Baumann has used this method with the chloroform-benzol mixture, and also has performed control experimenta. He finds that Hammerschlag's method yields uniform excessive readings, the error amounting to .012 in excess of the normal. From the whole of his investigations he arrives at the following conclusions:

1. Provided the same hydrometer is used, Hammerschlag's method of estimating the specific gravity of the blood is clinically easily applied and yields, both in health and disease, results which are uniform and reliable. 2. An error is associated with the use of this method, which is always in the direction of an excess. The excess is, however, uniform and constant. 3. As was shown by A. G. Levy, the error may readily be obviated by the use of a specially standardized hydrometer, or by the application of the rough method of correction suggested by this observer.

2. Temperature.—The evolution theories imply the derivation of the warm-blooded from the cold-blooded animals and physiologic facts support this conclusion. Newly born pups, kittens and rabbits have a low temperature. The warm-blooded animals can be divided into two classes: those at birth blind, helpless, and in some cases naked and incapable of regulating their temperature, and those which are born in a condition of greater development, and can keep their body temperature at a fairly constant level. Birds are classified in the same way. What is true of some of the mammals is also true of the human species. It is only within narrow limitations that the new-born responds to changes in the temperature as does the adult. The range of temperature in healthy man and animals has not been adequately determined. The evidence shows that only the rectal temperature represents the true internal heat of the body. The temperature in the stream of urine is next in accuracy, though the method is limited in its application. The internal temperature of a healthy man shows a range from 96.8 to 100 F. These are the average for the rectum and urine, and do not include the full physiologic range. Muscular work causes a marked rise in the temperature, which may go up to 101 or 102 without causing pathologic effects. There is no evidence to show that a rise in the internal temperature is injurious, in fact the evidence seems to be increasing that it may be beneficial. Pembrey holds that heat stroke and heat exhaustion are not due to germs, but to the disturbance of the nervous control of temperature brought about in most cases by muscular exercise in unsuitable clothes and in hot surroundings laden with moisture. In the case of a

phthisical patient, the rise of temperature after exercise is not of as much diagnostic value as the reaction after exercise and the temperature during rest. It is probable that many patients with slightly elevated temperature have been enfeebled by enforced rest in bed. In the healthy man the control of temperature is the same, regardless of the external conditions, provided normal metabolism can be kept up, and it correspondingly increases in cold temperatures. The idea that we should ward off colds by guarding against low temperature is a fallacy; colds in all probability are infectious diseases. Alcohol and anesthetics both lower the temperature; the lowest temperature recorded in a man who has recovered appeared to be in a drunkard who had been exposed to the cold. Anesthesia is a decided lowerer of temperature, and it is probably often too deep and prolonged. Pain may be a natural safeguard; it brings about the proper reactions to sensation which the anesthetic suppresses. A drug that will so profoundly disturb the nervous control of combustion can not be harmless, and the author suggests that many deaths are due more to the anesthetic than to the operation. The limits of bodily temperature compatible with life, so far as have been observed in pathologic conditions, seem to range from about 75.2 to 114.8 F. Higher and lower temperatures have been observed in moribund cases, but not where recovery took place; 114.8 appears to be the highest temperature endured by any patient who recovered, and then it was continued for only a very short time.

3. **Chronic Rheumatism.**—Acute rheumatism, Stockman holds, is a microbic infection running a regular course. It never becomes chronic, properly so-called, any more than typhoid or diphtheria. The name chronic rheumatism, however, has been long applied to special joint conditions, of which we are now distinguishing a number of varieties and separate species, and it is recognized that the parts implicated in true chronic rheumatism are the fibrous ligaments of the joint, more especially the fibrous tissue of the muscles and bones. The pathologic changes are confined to the white fibrous tissue and indurations occur which can often be felt in certain exposed localities. Muscle movement by increasing tension or by exerting pressure on the swollen tissue aggravates the pain. It is common for these fibrous thickenings to occur as accompaniments and sequelæ of acute rheumatism and continuing after the symptoms of the original acute attack have gone. They may also occur after influenza and febrile diseases. Chronic rheumatism is not a diathesis, but a local affection of fibrous tissue, and results from various causes. The symptoms are well known. For treatment of the acute exacerbations, massage, baths, phenacetin, sodium salicylates, etc., may be of value, but the relief is only temporary. To obtain a permanent cure the induration must be dispersed, and the only means Stockman has found of special and definite value are massage, exercise and faradism. The injection of a solution of chromic acid is also sometimes of value. Massage is the most effective. Chromic acid injection is only possible when the nodule is sharply defined and can be penetrated by the hypodermic needle. Superficial nodules should never be treated in this way, as the solution is apt to damage the skin and cause abscess. Ten minims or less of a 1 per cent. solution in water may be given. It causes temporary pain, but great consequent relief by shrinking of the swelling. If chronic indigestion is present, and especially lumbago, a mild purgative is advisable. There are no specific remedies, and the action of palliative remedies is not curative. The water cure may be of use in some cases. In diet the main rule is to avoid gastro-intestinal ferments and the absorption of irritant products. Residence in a dry stimulating climate may bring about a permanent cure. Certain nodules after prolonged massage may remain hard and refuse to dissolve, and these may be removed surgically with complete relief. In recent cases the prognosis is good and prolonged treatment may cure the older ones. Even in incurable cases, massage and stretching manipulations may give some freedom of movement. For prophylaxis he suggests careful treatment after rheumatic fever, influenza, etc., by massage, electricity and baths.

4. **Scurvy from Sterilized Milk.**—Ashby calls attention to the possibility of scurvy from defective milk, and briefly reports a case. He thinks there is a need of careful investigation of the results of sterilized milk feeding and haphazard methods of administrating municipal milk depots are to be condemned.

5. **Beri-Beri.**—Durham finds that the metabolism in beri-beri is seriously diminished, the amount of urea, phosphoric and sulphuric acids in the urine may be greatly reduced, and it is suggested that the contributing organs, for example the liver, are seriously disordered in their output, which agrees with the fact that the patients complain of illness before the onset of marked symptoms of the disease. The conjugated sulphuric acid and the neutral sulphur do not appear to be proportionately diminished in output. The purin bodies are not of such great interest in beri-beri as might be anticipated. They are abundant in critical urination of highly edematous cases. In a number of Tamils (Southern Hindoos) the excretion of urea and phosphoric acid was remarkably low, though the uric acid was high.

8. **Removal of the Crystalline Lens in High Myopia.**—Snell has operated on 40 patients and 59 eyes. It is sometimes well to be content with operating on one eye, and his rule has been to take the worst one. Where operation on the second eye was demanded he has been more willing to perform it on young adults than on others; 28 operations were performed on eyes, with 20 dioptics and above, and the lowest degree for which removal of the lens was performed was 10 D., and this in only one instance. If the operation is limited, as Snell believes it should be, to cases with myopia of 14 D. and upward, the number will necessarily be small. Out of 3,162 patients roughly divided into those with a myopia of 10 D. and above, and those of 10 D. and under, there were only 320 in which there was over 10 D., or a trifle over 5 per cent. Extraction was deemed unsuitable, and in every case the transparent lens has been needled, and at the end of the week, sometimes more or less, when the substance has become sufficiently broken up, an incision with a broad needle has been made a little distance inside the periphery of the cornea and the softened lens has been allowed to escape or has been coaxed out with the aid of a curette, the pupil having been previously dilated with atropin. By keeping the situation of the corneal wound inside the limit to which it dilates the danger of entanglement of the iris in the wound is materially lessened. The operation is similar to that frequently performed for zonular cataract. In all the cases a watch must be kept for increased tension, which is liable to be set up by a swelling of the lens, and in a few of his cases glaucoma has supervened, but removal of the broken-up lens immediately relieved the condition. When operating the endeavor is to remove as much of the softened lens as will escape without undue pressure on the globe. What remains will be absorbed, but further needling may be required. Needling may also be required for opaque capsule, and the treatment be somewhat prolonged. With care as to asepsis and the use of antiseptic solutions the dangers of the operation are trifling. The use of any suction apparatus is altogether unnecessary. It is desirable to keep the patient under close observation after needling in order to be prepared for pressure complications. In case they occur atropin may be discontinued and eserin substituted, but it will frequently fail to overcome the glaucomatous condition. The best plan is to tap the anterior chamber and to repeat, if necessary, the paracentesis. The danger of detachment of the retina from removal of the lens in high myopia is avoided by this method. Stockman has never extracted a lens for this condition.

The Lancet, London.

February 27.

9 *The Evolution and Action of Certain Muscular Structures of the Heart. Arthur Keith.
10 *The After-effects of Head Injuries. T. Crisp English.
11 Case of Rupture of a Tubal Pregnancy on the Nineteenth Day After Conception and Ten Days After the Uterus Had Been Curetted. William Duncan.
12 *Some Clinical Aspects of the Rheumatic Infection. Carey Coombs.
13 *Radioscopic and Radiographic Appearances in Pleurisy, with Especial Reference to the Upper Limit of Pleural Effusion. J. F. Halls Dally.

14 Cholecystotomy for Acute Post-enteric Infection of the Bile Channels; Recovery; Demonstration of the Presence of the Bacillus Typhosus. J. Lynn Thomas.
15 Some Impressions of Salsomaggiore and Its Baths. W. W. Baldwin.
16 A Case of Gangrene of the Right Foot Occurring in the Newly Born. Digby Cotes-Preedy.

9. **Muscular Structures of the Heart.**—Keith points out that the ordinary explanations of the cause of the lack of caval regurgitation from the auricles are anatomically insufficient; he explains the condition by reference to comparative anatomy. He finds that in the newborn child the condition is very similar to that of a reptile's heart. There are strong membranous valves which prevent regurgitation. In the adult the valves are reduced and muscular bundles take their place to some extent, but still leaving a chance for regurgitation with an engorged auricle. The article is illustrated by diagrams, which aid the explanation of how the auricular mechanism is constructed and how it acts. He discusses the conditions in pericarditis with adhesions, *etc.*, as affecting the circulation and the heart's functions.

10. **Head Injuries.**—English's second lecture discusses the consequences of head injuries, aphasia, agraphia and loss of arithmetical and musical faculty, traumatic somnambulism, lesions of the cranial nerves, facial paralysis, deafness, hemiplegia, etc. The diagnosis has certain difficulties. It is not always possible to show that what is attributed to head injury is really due to it. The possibility of malingering and exaggeration must always be kept in mind. The prognosis should always be guarded. For general treatment he insists on physical and mental rest as of first importance. The patient, however, should not be isolated, as this may do more harm than good. He should be under the care of a medical man who will see that the details of treatment are properly carried out, and he should not be sent away on a long sea voyage or to travel if because of no other reason than of the inability to exercise proper supervision. With mental quiet there should be continued high feeding and general massage. For drugs he condemns the bromides. They are useful in other conditions, but not in this. He sums up the general conclusions in regard to the treatment as follows:

1. In rather more than half of the cases cure may be brought about by medical measures; prolonged mental rest and the proper administration of mercury are the essential points. 2. In a few of the cases the symptoms are mainly due to chronic osteosclerosis, and such cases may be almost certainly cured by trephining. 3. In the remainder of the cases the symptoms are more persistent and do not yield to general measures or to the removal of thickened bone only. I believe that in such cases these symptoms are the reflex results of lesions or irritations of the dura mater; and if the injury has involved the vault of the skull cure can be effected promptly by excision of the thickened or adherent dura mater and removal of any other source of irritation which may be present.

He insists on the free opening in surgical cases and the operation in two stages in case of extensive brain lesions, as lessening shock and mortality.

12. **Rheumatic Infection.**—The different forms of complications of rheumatisms are discussed by Dally, who suggests that in many cases the organism persists in the infected tissue after all obvious inflammatory signs and symptoms have disappeared. It exists in comparatively, but not absolutely, harmless conditions, and is capable of being called into action. His belief is based on the cardiac disease occurring at varying periods after rheumatism, the recurrence of rheumatic affections themselves, the prolonged course of the chorea and endopericarditis in childhood. He summarizes that a certain similarity of effect, whatever tissue is infected, is apparent, and the capability of such infection to inflict any degree of damage on the tissues attacked within certain limits and to persist in the infected tissues, is also supported by observation.

13. **Pleurisy.**—Dally's conclusions in regard to the radioscopic shadow in pleurisy are that the level of the fluid changes with the position of the patient unless the quality of the fluid is great or is encysted by adhesions; that a pleuritic effusion yields a shadow of greater density than a serofibrinous effusion; that the shadow is homogeneous, and in the case of serous effusion gradually increases in density from above downward; that however far the heart is displaced to the right, in most cases little alteration takes place in the position of the apex relative to the base; that, other conditions being equal, the heart is displaced more when the effusion is left-sided; and that a somewhat triangular shadow, not normally visible, above and continuous with the shadow of the heart and pericardium, is cast by the mediastinum, displaced by lateral pressure toward the left side. In the majority of cases he thinks the results of radioscopic examination correspond with those of percussion. Where they differ the explanation may be as follows: The lung is liable to become adherent by a portion of its surface to the chest wall. The level of the fluid being represented by a straight line, the lung dipping into it may be represented by a curve, with its convexity below. The thin layer of fluid and the air-containing lung, opposite to where the lung dips into the fluid, may be seen as a lighter and more transradiant area, convex below, whereas at the sides where only fluid is present and no lung the shadow will be much more dense. In all the cases he has seen the serous effusion throws a light shadow usually with a well-defined curved upper margin. A purulent effusion throws a dense or even opaque uniform shadow. In the former case the rib outlines are not obliterated; in the latter they generally are. Pleural effusion can be distinguished, unless too great in amount, from thickening of the pleura by the changes of the level of the upper margin on movement, hence the *x*-rays may frequently show whether the difficulty is present in the chest or not, and from the density of the shadow give an idea as to the exudate.

Bulletin de l'Académie de Médecine, Paris.

17 (LXVIII, No. 6.) Remarques relatives au diagnostic de l'actinomycose. Le Dentu. Epithelioma of jaw simulating actinomycosis.
18 (No. 7.) Sur les types de l'inflammation dans les épithéliomes. Cornil.

Presse Médicale, Paris.

19 (I, No. 10.) *Les rayons X et la thérapeutique du cancer. T. Tuffier.
20 *Le dosage en radiotherapie. Procédés et instruments. A. Bécière.
21 *Le radium. A. Zimmern.
22 (No. 11.) Modes d'administration de la creosote. Gilbert.
23 *Pneumotyphoide et coli-bacille. P. Ardin-Delteil and Rimbaud.
24 Comment il faut administrer l'antipyrine. A. Martinet.
25 (No. 12.) *Le spéculum. F. Jayle.
26 Le diabète familial. A. Martinet.
27 (No. 13.) Propriétés dynamiques des humeurs. La cryoscopie. J. Winter.
28 (No. 14.) Traitement abortif des furoncles par une solution concentrée d'iode dans l'acétone. Gallois and Courcoux.
29 Le cautère et les états dits arthritiques. L. Brocq.
30 *Sécrétine. Médication dite duodénale. Stimulation des fonctions sécrétiniques chez l'homme. E. Enriques.
31 Les injections vaginales et l'acide sulfureux. E. Arbinet.

19. **X-Ray Treatment of Cancer.**—Tuffier argues that different kinds of cancers present different kinds of growth, particularly when in different parts of the body. This varying severity of the growth renders a varying scale of treatment necessary. What is effectual for one kind or in one location is powerless against another kind or the same kind elsewhere. He regards cancer as a disease with local manifestations, but usually under the dependence of a general condition whose nature is still unknown. A scrap of cancer grafted on a subject already invaded by cancer rapidly entails a new cancer growth, but not on a non-cancerous subject. For instance, he removed an epithelioma from the forearm of a woman, and closed the defect with a "bridge flap" of healthy skin from the abdomen. Seven weeks later she returned with an epithelioma in the abdomen at the point where the flap had been taken. Refusing an operation, she succumbed two months later to cancerous infiltration of the wall of the abdomen and thorax. In regard to serum treatment of cancer, his experience has shown that the first injections of almost any serum are followed by marked improvement, but that this soon subsides. His impression is that the serum rather accelerates the course of the affection on the whole. The serum induces a phagocytosis which temporarily arrests the tumor, but as soon as the organism has thus used up its reserves, the neoplasm continues its course unmolested. Change to another kind of serum and to a third and fourth produces the same kind of a transient improvement, shorter in each case, but the organism is only rendered less resistant by these demands on it. As soon as their effect subsides, the malignant disease

continues its ravages still more fiercely. Local treatment may suffice for cancers of merely local growth, and radiotherapy offers very promising prospects under these circumstances. Local treatment is also promising in case of cancer liable to involve the glands after a time, but general treatment must be the dependence for aborting cancers of a rapid growth and for visceral cancer and to restrict the frequency of recurrences after removal. He describes several cases treated with the *x*-rays. The blood findings before and after radiotherapy offered nothing characteristic.

20. **Dosage in Radiotherapy.**—Béclère describes and illustrates the various devices for dosage of the *x*-rays. Holzknecht's "chromoradiometer" was mentioned in THE JOURNAL, xxxix, p. 1075, with a view of the instrument. Benoist's "radiochromometer" is a circular disc. In the center is a thin disc of silver, and arranged around it are twelve sheets of aluminum, ranging from 1 to 12 mm. in thickness. The penetrating power of the rays as they pass through the aluminum is shown by the screen or by the action on sensitized paper, comparing the color under each aluminum sheet with that under the central silver disc. The penetrating power can thus be read as easily as the time on a clock.

21. **Radium.**—Zimmern states that Curie explains the properties of radium by "perpetual molecular transformation." Nothing else, he thinks, explains the spontaneous generation of energy, light and electricity in radium and allied substances. Another theory regards radium as the intermediary which transmits a radiation from space of a kind which our senses are unable to perceive. Zimmern describes a number of interesting scientific tests and experiments with radium, especially those in respect to its emanations.

23. **Pneumotyphoid and Colon Bacillus.**—In the case whose history is given all the symptoms indicated an exclusively thoracic affection at first. From the sputa the colon bacillus was isolated. The pneumonic phase lasted seven days with a crisis, but certain characteristics of the pulse were not like those of pneumonia, and the constipation, gurgling in the right iliac fossa and general depression also attracted attention. The Widal test applied the eighth day was positive. The second phase was predominantly abdominal and unmistakably typhoid, with final defervescence the twentieth day. The authors are inclined to regard the case as due to the colon bacillus exclusively. In the lungs it retained its characteristics, but in the intestines it adapted itself to its environment and behaved more like the typhoid bacillus. They think this is more probable than the assumption of simultaneous invasion of the organism by the colon bacillus in the lungs and the typhoid bacillus in the intestines.

25. **The Speculum in History.**—In 32 different illustrations Jayle traces the history of the speculum through the ages, from those found at Herculaneum down to the present day. He advocates the exaggerated Trendelenburg position for introducing the vaginal speculum.

30. **Acid Duodenal Medication.**—The specific physiologic stimulant for the pancreatic secretion—according to Pawlow—is the contact of a sufficiently concentrated acid solution with the mucous lining of the duodenum and jejunum. Enriquez has established further that this "acid reflex" controls a number of multiple functions, both motor and secretory, influencing both the bile and pancreatic juice secretion. He bases treatment of dyspepsia on these findings. Treatment of dyspepsia hitherto has been addressed too exclusively to the stomach. He believes that this extremely specialized action of the duodenal mucosa is in many cases the mechanism at fault in dyspepsia. In order to influence it and elicit the "acid reflex," he administers tartaric acid in gluten-coated capsules, which pass through the stomach unmodified and do not dissolve until they reach the duodenum. By this means the acid reaches the exact point where it elicits its reflex, and the results in the clinic corroborate these theoretical premises. Sixteen patients were treated in this way. In 7, habitual constipation was the main symptom, and this duodenal acid medication soon stimulated both motor and secretory functions of the intestines and restored normal conditions. One patient, with sclerosis in patches, had no stools for six to eight days at a time, rebellious to purgatives. Under this duodenal medication the stools became regular, but constipation returned so soon as it was suspended, to yield again when it was resumed. In another patient the constipation persisted for twelve days at a time, accompanied by palpitations, vertigo, headache and complete loss of appetite. After a few days of the acid treatment, the stools became regular and the other symptoms vanished. In 5 cases the constipation was accompanied by signs of mucomembranous colitis, which were improved at the same time as the constipation. Another group of patients suffered from evident neuromotor dyspepsia. The digestion was sluggish, with oppression after meals sometimes amounting to pain, somnolency, congestions and constipation. The duodenal acid banished all these symptoms in a short time.

Semaine Médicale, Paris.

32 (XXIV, No. 6.) *Perforations of Nasal Septum Outside of Syphilis. E. Féilz.—Perforations de la cloison nasale, etc.

33 Isolation of Tuberculous Subjects in French Hospitals.—L'isolement des tub. dans les hôpitaux français.

34 *The N Rays. A. Charpentier (Nancy).—Action physiologique des rayons N et des "radiations conduites." From society report.

35 Considérations sur la structure des cellules nerveuses. Van Gehuchten (Louvain). From society report.

36 Traitement du cancer cutané par introduction électrolytique de l'ion zinc. S. Leduc (Nantes). Editorial abstract.

37 (No. 7.) *De l'élongation nerveuse dans la maladie de Raynaud. R. de Bovis (Rheims).

38 *Comparison of Mortality in Russian, French and German Armies. Dolmatof.—La mortalité comparée des armées russe, française et allemande, 1800-1900. Abstract.

39 (No. 8.) *Du rôle des animaux dans la propagation de la tuberculose et des autres maladies transmissibles. L. Bard (Lyons).

40 *Les formes phlegmoneuses du cancer. F. Lejars.

41 Traitement de l'oesène par les injections de paraffine sous la muqueuse des cornets. Heismoortel and Broechart. Editorial abstract.

42 Preservation of Milk with Formol from Standpoint of Science and Law.—Le procédé de conservation du lait par le formol devant la science et devant la loi.

43 L'irrigation vésicale au moyen d'une sonde à double courant. Lignac. Editorial abstract.

44 Nux Vomica and Soda in Hyperemesis Gravida.—Traitement des vomissements incoercibles de la grossesse par la noix vomique associée au bicarbonate de soude. Editorial abstract.

32. **Non-Syphilitic Perforation of Nasal Septum.**—Lejars shows that perforation of the nasal septum may occur as a sequel or in the course of typhoid fever, diphtheria, tuberculosis, smallpox, lupus, leprosy, glanders and rhinoscleroma, Bright's disease, tabes, sarcoma and polyps. He cites instances of each, and also reviews the groups of perforations due to the fumes of chemicals, etc., to trauma or foreign bodies, perichondritis or rhinitis. A number of writers have mentioned that nearly 50 per cent. of the workers in potassium chromate acquire a perforation of the septum sooner or later. Hermann found 24 thus affected out of 31 who had been working with the chromate for more than a year. Toeplitz found perforation of the septum in 19 out of 31 workmen using copper arsenite.

34. **N Rays.**—Charpentier announces that the N rays can be transmitted by a wire or other metallic body. He uses a small copper plate—the transmitter connected by an insulated copper wire with another copper plate coated with phosphorescent sulphid—the sensitized screen receiver. The visual acuity is increased under the influence of the N rays emanating from a steel plate held to the head in a dimly lighted room. The subject can see better. The maximum effect is realized when the steel is held opposite the angular gyrus. Charpentier has found on his own person that luminous sensations were produced in the dark under the influenc of the N rays. He announces this as the first example of direct nerve stimulation under the influence of the rays. He has also established that the pupil reacts under their influence, and in a different manner according as the rays are directed on the quadrigemina or the ciliospinal center at the seventh cervical vertebra. These effects are most pronounced when the conducting apparatus described above is interposed. [The *Lancet* of February 27 describes tests of these rays with a modification of Charpentier's technic, which was found more effectual.

The fluorescing screen is a sheet of very thin celluloid, coated with calcium or zinc sulphid in the center, the round patch about 1 cm. in diameter, the sulphid spread so thin that print can be read through it. The screen is "excited" by being held near a source of ultraviolet rays, and the fluorescent light is then allowed to die away until it has reached the steady stage. If a contracting muscle be then placed under the screen, its light will be seen to become perceptibly brighter. One of the most convincing tests is to place a feebly fluorescing screen on the floor by the bare foot in a dark room. It is almost impossible to make out the screen under these circumstances, but if it is placed on the toes, and they are worked, the screen glows so that it can be readily seen by the standing subject. After simply placing a speck of recently excited calcium sulphid on a thick book a distinct increase in the glow is obvious when the muscles of the hand or arm are contracted underneath. We notice in this connection that Mendeleef, the great Russian chemist, the discoverer of the "periodic law" of chemical elements, has recently published his belief that the ether is a highly penetrative, elastic gas, a real chemical entity, and that it is responsible for the phenomena of radio-activity.—ED.]

37. Nerve Stretching in Raynaud's Disease.—De Bovis gives the particulars of 2 cases of symmetrical gangrene of the hands, which were practically cured by stretching the cubital and median nerves at the wrist. He advises careful hygiene of the parts and general tonic treatment, and adds that the stretching of the nerves does not radically cure the affection, but improved it to such an extent in his cases that the measure should certainly be given a trial in every case. It has a favorable influence on the dystrophy, but should be supplemented by frictions and local baths, etc., to promote the circulation in the parts, with removal of the gangrenous patches. The latter is the only measure that will certainly relieve the pains in all cases. The disease is more than a mere disturbance in the trophic innervation, and, in his cases, the cure of the trophic lesions was accompanied by no more than mere improvement in the vasomotor disturbances. The hands are still somewhat cold and subcyanotic.

38. Mortality in European Armies.—Dolmatoff states that the mortality from typhoid fever in the Russian army during the years 1889-1900 ranged from 1.02 to 1.91 per 1,000 (French army, .96 to 1.88 per 1,000). The pneumonia mortality was below that of the French army, but a trifle above that of the German, being .49 to .99 per 1,000. The dysentery mortality, .12 to .2 per 1,000; the French, .1 to .33, and German, .01 and .02 per 1,000. The total mortality among the privates was 6.4 per 1,000, while in the French army it was 5.9 and in the German, 2.7 per 1,000. The German army leads in the number of suicides, ranging from .33 to .64, followed by the French army, with .19 and .31, and the Russian with only .11 and .17 per 1,000.

39. Role of Animals in Propagation of Disease.—Bard thinks that this factor in the transmission of microbian disease is being rather overestimated at present.

40. Phlegmonous Forms of Cancer.—Lejars dwells on the "hints" which may serve for the differentiation of the abscesses which are the initial stage of malignant disease and not the mere phlegmons which they appear to be. These suppurating cancers, the phlegmonous varieties, generally display peculiar malignancy, with rapid diffusion, offering little prospects for effectual surgical intervention. Differentiation in the earliest stages, although difficult, is not impossible in most cases. Careful examination will reveal some suggestive features, the "exceptional" hardness of the surrounding tissues, the large base of the lesion, deep and adherent, the absence of decided limits, and the special, purplish color of the skin, while the general health also is more affected than is usual with an ordinary suppurative process. The blood findings are not characteristic.

Deutsche medicinische Wochenschrift, Berlin and Leipsic.

45 (XXX, No. 7.) *Reciprocal Relations Between Skin and Kidney Activity. E. Bendix.—Ueber Wechselbeziehung zwischen Haut- und Nierenthätigkeit.

46 Das Dysenterie-Toxin (auf natürlichem Weg gewonnen). L. Rosenthal (Moscow). Obtained by filtering bouillon cultures.

47 Zur Serum-Therapie des Tetanus. W. Hellwig.

48 *Poisoning with Mustard. W. Kolbe.—Ueber Senfvergiftung.

49 *Aseptic Catheters. B. Goldberg (Cologne).—Die keimfreie Aufbewahrung weicher und halbweicher Katheter.

50 Disappearance of Liver Dullness in Consequence of Superposition of Large Intestine. R. Hoffmann.—Ueber das Verschwinden der Leberdämpfung infolge von Dickdarmüberlagerung.

51 *Ueber Alkohol-Verbände (dressings). Wohl.

52 Diaphragm for X Rays. E. Bille (Dresden).—Eine irisblende für Röntgenzwecke.

53 Die Behandlung des Puerperal-Fiebers (aus den Jahren 1901, 1902 und 1903). R. Müllerheim.

54 *Die Pest unter den Ratten den Dampfers "Cordova." Nocht (Hamburg).

55 (No. 8.) *Sensibilising Phototherapy. A. Neisser and Hallberstaedter.—Mittellungen über Lichtbehandlung nach Dreyer.

56 *Zur Bekämpfung der Tuberkulose. C. Flügge (Breslau).

57 *Ueber den diagnostischen Wert der Tuberkulin-Reaktion. B. Schlüter (Rostock).

58 *Ueber Behandlung einer Pylorus-Stenose mit Thiosinamin. A. Hartz (Carlsruhe).

59 *Light and Color Tests of "Expression-Movements." Sommer (Giessen).—Darstellung von Ausdrucksbewegungen in Licht und Farbenerscheinungen.

45. Value of Diaphoretic Treatment in Kidney Affections.—Bendix epitomizes the results of considerable experimental research under Ebstein's direction in the statement that he found it impossible to influence the normal freezing-point of the blood by even the most energetic sweating procedures. He was unable to induce a thickening of the blood by withdrawal of water, nor, by the elimination through the sweat of substances dissolved in it, to reduce the molecular concentration of the blood. This applies to both the normal animals and those with kidney affections. In the clinic he conducted similar research on patients who had to be treated by diaphoresis and venesection at the same time—mostly cases of kidney disease. The sweating was induced with the Quincke-Dubois hot-air apparatus, and the weight of the subjects diminished by 500 to 1,500 gm. under it. The sweat was accumulated on a rubber sheet. The results harmonized with those obtained with the animals. When the freezing-point was normal—.56 C.—the most energetic sweating procedures had no influence on it. On the other hand, when the freezing-point of the blood was pathologically low, as in chronic nephritis, the sweats raised the freezing-point almost to the normal standard. This result is the more remarkable, as the sweat is usually hypotonic in regard to the blood, and the result naturally to be expected would be a thickening instead of a dilution. The findings suggest the probability that the body must always have abundant reserve supplies of water on hand somewhere, which serve at need to wash out the solid substances. He found that more solid substances were eliminated in the sweat under these circumstances than when the freezing-point remained at a constant level. This was particularly noticeable in a case of acute uremia. He does not attribute much importance to the variations in the freezing-point of the sweat, but these experiences emphasize the value of energetic sweating procedures in case of insufficiency of the kidneys—manifested in a pathologically lower freezing-point of the blood—as a means of restoring the freezing point of the blood approximately to normal. The character of the kidney trouble does not seem to affect this result. He has also derived the impression from these researches—although unable to scientifically prove it—that ingested iodin is also eliminated in the sweat, subject to individual variations, both in normal and nephritic subjects.

48. Intoxication from Mustard.—Kolbe reports a case of intoxication from the use of mustard seeds taken in self-treatment for a stomach trouble. The symptoms were those of serious narcotic poisoning, contrary to what has been previously recorded from this cause. Treatment should consist in artificial respiration, then lavage of the stomach, stimulants and eventually a milk diet. Strychnin has experimentally proved an antidote for mustard poisoning, but whether to prefer it to atropin—the symptomatic remedy for the spasm of the diaphragm—is still an open question. The diagnosis in dubious cases is aided by the odor of the expired air and of the urine, distillation of the urine and stomach content with

water to obtain the ethereal oil of mustard, and mustard seeds in the stools. The patient recovered after a few days of serious illness, but died a year or so later after an operation for stricture of the ascending colon, which was found gangrenous. Otherwise the organs were normal. The case suggests the danger of mustard for internal application. It is used currently in the household as a harmless remedy and emetic, but Posner, as long ago as 1864, warned that even a tablespoonful in a glass of water is liable to set up a fatal gastritis on account of the content in ethereal oil of mustard. Kolbe thinks that the effect on the medulla oblongata is even more to be feared than its local action in the stomach.

49. **To Keep Catheters Aseptic.**—Goldberg uses a glass ring with a hooked handle to suspend the catheter in a glass test tube, plugged with cotton. Another way is to use a test tube that has a constriction at the base of the neck. This constriction holds the flaring end of the catheter or a glass ring slipped over the catheter. By the use of these tubes, with a constriction at the base of the neck, several bougies or catheters can be kept in a single bottle, all held by the flaring upper end. He sterilizes the whole with steam, and then puts the catheters in the tube, which he fills with a 1 to 3 per cent. solution of boric acid to 1 or 2 cm. above the catheters. He then pours on the top of the fluid a layer about 1 cm. thick of sterile olive oil. Patients should be instructed to have a separate tube for each catheter, but physicians can keep several in one tube. The catheter is taken out by inverting the tube.

51. **Alcohol Compresses.**—Wohl confirms the prompt benefit derived in suppurative processes from the application of compresses soaked in 95 per cent. alcohol. It causes the rapid retrogression of an incipient process and checks the progress of advanced ones without extensive breaking down. It relieves the pain also better than any other moist compress. He describes 3 illustrative cases out of an extensive experience. One patient was a young woman nursing her first infant. Both breasts were very painful, red and hard, temperature 41 C., and pulse 140-150. The day after the alcohol was applied the temperature was normal, pulse 80, and in three days the child was nursing normally.

54. **Modern Methods of Disinfecting a Plague Ship.**—Nocht of Hamburg gives the details of the disinfection of the steamer *Cordova*, which arrived from Brazil Dec. 25, 1903. Every ship arriving at Hamburg is searched for dead rats by the sanitary authorities. During the last year they were found in 36 ships and plague bacilli were found twice. When the *Cordova* began to unload, the inspectors found at noon seven dead rats. By 3 o'clock the ship was notified that the findings were suspicious, and it was ordered to leave the quay and anchor in the open water. The Nocht-Giemsa disinfecting apparatus was installed the same day, and the hold and living rooms were filled with the gas generated. The next morning fresh air was pumped into the hold by the same apparatus, and the unloading of the ship on lighters allowed to proceed. The cargo consisted of sacks of coffee and bran, and as each sack was brought up it was inspected by the sanitary officer. All on which there were signs of rat manure or gnawing were loaded into a separate lighter, which was isolated for a period of two weeks, with no possibility of contamination from other rats, after which the unloading was allowed to proceed without further restrictions. None of the rest of the cargo was interfered with, and it was unloaded and stored in the warehouses as usual. No plague rats were found anywhere in the ship except in the compartment where the first had been discovered, and all in this compartment had died before the gas disinfection. The gas killed 139 rats in all, including a number of nests of young rats in inaccessible crevices. The crew and others working on the ship were required to wear an outer suit while at work, with gloves, etc., and on leaving work to clean their hands and shoes with kresol soap. They were examined by a physician once a day, and for five days after the unloading of the ship was completed. Otherwise they were not interfered with. After the ship had been unloaded it was disinfected anew with lime in the hold and the living rooms with formaldehyd. All the sweepings of the ship were burned, as is compulsory for all ships in Hamburg harbor. In five days from the finding of the dead rats, the sanitary officers withdrew and the ship sailed in two days with a new cargo. A few sacks had been carried into the warehouse before the first rats were found, and they were isolated by covering them with tarpaulins and building a high board partition around them, shutting up in it a couple of trained rat dogs. After the two weeks' period was past the partition was removed and the sacks not further interfered with. The purpose of these measures was to keep the rats in the warehouse from access to the sacks during the period of isolation. No case of sickness developed among the crew or those having anything to do with the ship.

55. **Dreyer's Sensibilizing Modification of Light Treatment.**—Dreyer's important contribution to phototherapy was described in THE JOURNAL recently, page 469. Neisser and Halberstaedter have been testing it at the Breslau dermatologic clinic, and their experience entirely corroborates the great value of this method of preparing the tissues for the action of the therapeutic light rays. Attempts to explain by fluorescence and absorption the mechanism of this sensibilizing action all fail, but with it the reaction in human skin is many times deeper with a very much shorter exposure. The Finsen light treatment never reaches the depths now possible with this modification. A further advantage is that the sensibilizing fluid can be injected directly at the deep point where the therapeutic action is desired, thus sparing the superficial tissues from any intensification of the light action where it is not needed. Several stains were tried—eosin, cyanin, etc.—but erythrosin surpasses them all in its effects and also in its harmlessness. Applied in the clinic in 25 cases of lupus, spina ventosa, scrofuloderma, tuberculous lymph glands and cutaneous cancer, the strength of the reaction and its course show that the light treatment thus modified is much more energetic and effectual than ordinary Finsen light treatment. A 1 per cent. or per 1,000 solution of erythrosin in .85 per cent. salt solution was injected according to the Schleich infiltration technic as deep as the effect was desired. Two to five hours later the Finsen light was applied for fifteen to twenty minutes, or longer in case of carcinoma.

56. **Flügge's Reply to Behring.**—Flügge does not regard any of Behring's recent statements in regard to the origin and prophylaxis of tuberculosis as important except those bearing on the immunization of cattle. Even this Flügge considers a subordinate factor for the prevention of tuberculosis in man. Sufficient time has not yet elapsed to determine whether the cattle immunized by this method retain their immunity permanently.

57. **The Tuberculin Test.**—Schlüter tabulates the details of 30 cases in which the tuberculin test was applied with positive results out of a total 100. They prove that a reaction to a small dose occurs almost exclusively in subjects with an active tuberculous process, while those with a latent, inactive process and those entirely exempt do not react except in very exceptional cases. He starts with 2 mg. of Koch's old tuberculin and never surpasses 5 mg. These small doses can never do harm, he thinks.

58. **Thiosinamin in Stenosis of Pylorus.**—An intelligent man of 56 had suffered for thirteen years from gastric disturbances, due to stenosis of the pylorus. After failure of all other means of relief an operation was contemplated, but owing to the unwillingness of the family it was postponed from time to time. Attention had just then been called to thiosinamin, and it was tried as the last medical resource. One-half a Pravaz syringeful of a 15 per cent. alcoholic solution was injected into the back, and the patient's condition began rapidly to improve. In two months he was freed from the most distressing symptoms, and in another month—after the thirteenth injection—he was eating ordinary food at the family table. At date of writing he has received twenty-three injections during the five months, and considers himself cured. All the details of the case are recorded; they show that the reaction to the drug is not severe; headache and depression

were noticed only once or twice, and only after the first injections. The stools became regular soon after they were commenced, and the patient increased in weight.

59. **Representation of "Expression-Movements."**—Sommer gives illustrations of an instrument which he has devised for tests in experimental psychology. The hand placed on a floating tablet transmits its threefold movements by wires to three electric lights of different colors, the variations in the shade or intensity of the light corresponding to the movements of the hand. He has thus been able to study the movements in various nervous affections, and proposes to describe his experiences in detail at the approaching congress of experimental psychology at Giessen.

Monatsschrift f. Geb. und Gynäkologie, Berlin.

Last indexed page 805.

60 (XVIII, No. 4.) Stretching of Lower Segment of Uterus with Intact Fetal Membranes. S. Goldner.—Dehnung des unteren Uterussegments bei stehender Blase.

61 Die Bossi'sche Methode bei Aborten und bei Geburten nach Verstreichen der Portio vaginalis. E. Schürmann.

62 Secondary Suture of Perineum in Childbed. D. Abulades (Kiev).—Ueber sekundäre Dammnaht im Wochenbett.

63 Fall von Aplasie des Uterus und der Vagina. A. Hofmann.

64 *Relations Between Hysteria and Female Sexual Organs. G. v. Voss (St. Petersburg).—Beziehungen der Hysterie zu den weiblichen Sexualorganen.

65 *Zur Hyperemesis gravidarum. P. Jung.

66 Zur Technik des Bauchschnittes (of abdominal incision). Müller.

67 (No. 5.) *Illumination of Abdominal Cavity. D. v. Ott (St. Petersburg).—Die unmittelbare Beleuchtung der Bauchhöhle, der Harnblase, des Dickdarms und Uterus zu diagnostischen und operativen Zwecken.

68 *Ueber die Lymph-Organe der weiblichen Genitalien und ihre Veränderungen bei Carcinoma uteri. Kroemer.

69 Aktinomykose der Ovarien. H. Geldner.

70 Ueber einen durch ein submucöses Myom komplizierten Geburtsfall. Knatelz.

71 Causes of Rise in Blood Pressure During Labor. O. O. Fellner.—Ueber die Ursachen der Blutdrucksteigerung in den Wehen.

72 Uterine Cancer and Pregnancy. E. G. Orthmann.—Gebärmutterkrebs und Schwangerschaft; nebst Beitrag zur Lehre vom vaginalen Kaiserschnitt.

73 Zur Tuberkulose der Eierstockgeschwülste (of ovarian tumors). L. Wechsberg (Vienna). One case.

74 History of Winterhalter's Ovarian Ganglion. V. v. Ebner.—Zur Geschichte des Wechen Ovarialganglions.

75 (No. 6.) Indikation und Technik des Steinhakens (buttocks hook). W. Pomfick.

76 Ueber Geburten bei Steisstumoren (delivery in cases of buttocks tumor). Uthmöller.

77 Zur Hände Desinfektion. H. Fuchs and Mohaupt (Zweifel's clinic, Leipsic).

78 Dilute Soda for Softening Hands Before Sterilizing. H. Fuchs.—Zur Verwendung verdünnter Natronlauge zwecks Aufweichung der Hände vor der Keimentnahme.

79 *Zur Aetiologie und Pathogenese der Dysmenorrhoe. V. Schultz.

80 Coitus-Verletzung (injury). O. Frankl.

64. Relations Between Hysteria and Female Genital Organs.—Voss does not believe that hysteria develops any more frequently on a basis of affections of the genital than of other organs. Most of the neuroses observed in gynecology are not typical hysteria, but belong rather to the group of degenerative hysteriform tendencies. Inherited predisposition and psychic contagion are important evidence in favor of a nervous origin. Further study is needed to determine which affections in the genital sphere do not usually entail sequelæ for the nervous system. He warns that technically simple gynecologic operations, even the narcosis alone, may be of great importance in this respect and prove disastrous for the nervous system. Diversion of the attention is better for nervous disturbances. Local interventions have a tendency to aggravate the subjective symptoms on a nervous basis, or recurrences are liable after a brief period of improvement.

65. Hyperemesis Gravidarum.—Jung recommends strict bed rest and nothing but iced milk per os. If the vomiting continues, rectal feeding only, returning tentatively after a few days to mouth feeding. The failures of this mode of treatment are usually due to the patient's surreptitiously obtaining food. The pregnancy should not be interrupted until all other measures have been tried, including the removal of the patient to a hospital.

67. Direct Illumination of Abdominal Cavity.—Ott's retractors supplied with electric lights have already been described in these columns (see also page 686). He gives illustrations of them here and his method of using them, the patient in an exaggerated Trendelenburg position to cause the intestines to slide down away from the viscera being examined. He is particularly pleased with his forehead lamp and reflector which focuses a flood of light on the parts he is inspecting, especially valuable during a laparotomy, supplemented by as many small lamps introduced inside the abdomen as may be needed. The findings are shown in a number of illustrations.

68. Lymphatics and Uterine Cancer.—Kroemer's study of cadavers of young and old subjects has demonstrated that the number of communications between the lymphatics in the uterine region is larger than hitherto taught. Consequently he thinks abdominal ablation with removal of all suspicious glands is indicated for early cases of sarcoma or endothelioma in the uterus, and also for similar carcinomata in young or pregnant women. Also for rapidly disintegrating cases of cancer of the cervix developing by infiltration. It is also indicated in advanced cases of cancer of the portio or corpus uteri. Vaginal total extirpation will answer for incipient pure portio and corpus cancer without complications, proceeding by a liberal vaginoperineal incision and resection of parametrium. Advanced cases of the soft cancers in the first group are no longer operable. Even the most exhaustive search for infected glands will be futile. He urges an exploratory excision and microscopic examination as an indispensable preliminary to operating. In statistics those cases in which the glands were examined should be classed apart from others. He further urges that gynecologists should pay more attention to the postmortem findings. In 80 cases examined he found the parametrium infected in 44, and in half of these the glands were cancefous; in the others they were apparently free from cancerous infection. Certain kinds of cancers displayed a greater tendency than others to glandular involvement. The most malignant in this respect were always the polymorphous-celled tumors of the cervix, both the sarcoma and endothelioma class and the adenocarcinomata—all presenting in common a marked tendency to a soft, infiltrating growth.

79. Dysmenorrhea.—Schultz remarks that there can be no doubt that the dysmenorrhea in certain cases in girls and young nulliparæ is due to defective structural development of the infantile connective tissue in the outer layers of the wall of the uterus. After failure of all other measures it may be advisable to slit this outer capsule, from outside inward, as a last resort in certain individual cases. In palliative treatment vasoconstricting measures will be found useful, expelling the blood from the congested vessels of the parts.

Münchener medicinische Wochenschrift, Munich.

81 (LI, No. 6.) *Improved Apparatus for Inducing Hyperemia. A. Bier (Bonn).—Ueber einige Verbesserungen hyperämisierender Apparate.

82 *Ueber oesophagoskopische Diagnostik. H. Starck (Heidelberg).

83 *Retention Stomach Tube for Stricture of the Esophagus. G. W. Schiele (Hannberg a. Saale).—Dauermagensonde bei Striktur der Speiseröhre.

84 Komplikation der Gravidität mit Perityphlitis. A. Labhardt.

85 The Speech in Epileptic Confusional States. Raecke.—Das Verhalten der Sprache in epileptischen Verwirrtheitszuständen.

86 *Can Glassblowing Induce Emphysema? Prettin.—Kann durch Glasbläsen ein Lungen-Emphysem erzeugt werden?

87 Ueber Multiplizität der Taenia saginata. E. Reise (Heidelberg).

88 Ein neuer Aspirations- und Infusions-Apparat. Koeppel.

89 Zur modernen Lehre der Eklampsie. W. Weichardt.

90 *Artificially Induced Anemia. B. Müller (Hamburg).—Ueber künstliche Anemie. (Commenced in No. 5.)

91 (No. 7.) *Experiences with Biologic Blood Test. G. Hauser.—Ueber einige Erfahrungen bei Anwendung der serodiagnostischen Methode für gerichtliche Blutuntersuchungen.

92 *Simple Method for Differentiating Human and Animal Blood. H. Marx and R. Ehrarooth.—Eine einfache Methode zur forensischen Unterscheidung von Menschen- und Säugetierblut.

93 *Zur Prophylaxe der Ophthalmoblennorrhoea neonatorum. Dauber.

94 *Anatomical Conditions for Healing of Apical Tuberculosis. A. Hofmann.—Welchen Antheil an der Ausheilung der tuberkulösen Lungenspitzenerkrankung nehmen die Gelenkbildung des Knorpels der ersten Rippe und die gelockerte Verbindung zwischen Manubrium und Corpus sterni?

95 Improved Tests of Chemical Disinfection. G. Bellei.—Verbesserte Methode zur Bestimmung des Wertes von chem. Desinfektion.

96 Ueber die Hämolysine des normalen Blut Serums. H. Sachs.

97 Glycerin und Lymphe. E. Levy.

98 Fall von Pneumokokken-Pyocele. A. Müller.
99 Fall von Pyämie nach Operation eines Nasen-Rachen-Polypen. Manhenke.
100 Progress in Medicine Entails Deterioration of the Race. E. Bleuler.—Führen die Fortschritte der Medizin zur Entartung der Rasse?

81. Improved Apparatus for Inducing Hyperemia.—Bier's illustrations give a clear idea of the various apparatus he describes. He has been much pleased with the success of one style with which he is able to produce a vacuum around a stiff joint and thus induce a curative hyperemia. The arm or leg is placed in a wide, stout glass cylinder, a connecting rubber cuff fitting airtight around the limb above and below the glass cylinder. A contrivance like a bicycle pump aspirates the air from the interior and the part reddens, sweats and feels warm in the rarefied air. The apparatus is arranged so that the stiff joint can be subjected within it to passive and active movements, and it has proved very effectual. Its principal field is in the cure of traumatic ankylosis of the joints. His hot-air apparatus has been modified, as shown in an illustration, for use in trigeminal neuralgia. The tip of the tube has a wooden cover to prevent burning the hand, and the other end of the tube is finished with a ball and socket joint which allows the tube to be moved sufficiently to direct the stream on any part of the face. Gas or an alcohol lamp supplies the heat. The mistake is frequently made in applying superheated air that the box for the air is too small, and the heat is applied at one point instead of being diffused through the space containing the limb. He has frequently found superheated air effectual in improving cases of chronic articular rheumatism after the entire failure of electric light baths. Passive hyperemia is also liable to prove very effective in these cases. The finest results he has yet attained were with passive hyperemia in the cases of three children with very severe chronic rheumatism. He applies the constricting bandage for this purpose for twelve to twenty-two hours a day, massaging away, once or twice during the day, the edema which accumulates and is beneficial in this affection, but not in all others. The passive hyperemia is peculiarly useful for the chronic cases with a tendency to ankylosis or acute exacerbations. In the more chronic cases, passive hyperemia is less effectual than the active, as a rule, but much can be accomplished with it, although the results have not realized all his anticipations in this respect.

82. Esophagoscopy.—Starck states that he has used the esophagoscope one or more times on 46 patients presenting some lesion in the esophagus. Among other facts thus learned by this direct inspection is that the so-called neuroses are not so frequent as hitherto assumed. Some lesion is always found to explain them. The aspect of a diverticulum can never be mistaken or forgotten.

83. Retention Stomach Tube for Stricture of Esophagus.—Schiele has restored a patient to comparative health by rendering the esophagus permeable when it had been almost entirely obstructed by a carcinomatous stricture. He accomplished this by introducing into the lower esophagus a drainage tube, about 30 cm. long, with a dozen large openings. It was inserted with a guide tied to the tube with catgut at the lower end. The catgut soon dissolved in the stomach, allowing the guide to be withdrawn. A string passes through one of the holes in the upper end of the tube, and is tied around one of the teeth. With this string the tube is drawn out and a fresh one introduced every fifth day or thereabouts. The patient is a man who had been reduced to a skeleton before this intervention, the esophagus not allowing the passage of more than a glass of fluid during the entire twenty-four hours. He is now able to eat any quantity of soft eggs, thick soups, etc., and experiences no discomfort from his tube. If by any mischance it should escape and slip down into the stomach, Schiele does not think that this would be much of a calamity under the circumstances.

86. Lung Affections in Glassblowers.—Prettin found that the muscles seem to adapt themselves to their task so that glassblowers are not apparently more liable than others to have pulmonary emphysema. But, on the other hand, he found an unusually large proportion of tuberculous lesions among them. Fully 20 per cent. of the workmen presented evidences of a tuberculous lung affection, while emphysema was observed in only 5 out of the 230 glassblowers examined. It was very slight in the 2 subjects between 40 and 50 years old, and the 3 others were 52 to 58 years old, and had been glassblowers for thirty-four to forty-three years. He cites Fischer to the effect that not a single instance of emphysema was found in 800 members of military bands, as he published in 1902.

90. Suprarenin to Artificially Induce Anemia in Operations.—Müller relates experiments with suprarenin as a means of preventing bleeding during operations. He waxes enthusiastic over its virtues in this line, especially for operating on the liver. It is also extremely valuable for expelling the blood to allow better oversight of the conditions anywhere. In extirpating the thyroid or a salivary gland a 1/10,000 solution effectually expels the blood from all the finer and medium-sized vessels. The walls even of the arteries contract so that fewer ligatures are required, the field is cleared and the nerves can be more readily traced. His experiments were conducted on dogs, and he found that all kinds of minor operations on the neck could be done without the flowing of a drop of blood. He gives a table of 70 major operations performed on dogs, laparotomies, cystectomies, resection of liver, nephrectomies, etc., after preliminary injection of the suprarenin. There was only slight bleeding in 22, and none at all in the 52 others. The 1 per 1,000 and 2,000 solutions induce anemia immediately in all kinds of tissue, and may be used in this strength in operating on the kidney and liver, but a 1 per 5,000 or 1 per 10,000 is sufficient for the purpose in skin, fat and muscle tissue. The anemia is complete, either immediately or not later than two minutes. He announces that as much as 10 c.c. of the 1 per 1,000 strength may be safely injected into an adult without fear of indications of intoxication. In these strengths the suprarenin has no injurious influence on the living cells. He also proclaims that a 1 per 10,000 and 20,000 solution has a stimulating action on the heart muscle when injected directly into it, and 1 c.c. of this strength may be injected into the myocardium without harm. For inducing anemia the suprarenin must be injected directly into the tissues, as applied externally its action is not so apparent. It is destined to prove a great help in operating on debilitated and other subjects who have no blood to waste. Its action is apparent by the yellowish tint assumed by the tissues, and its influence lasts for a long time, sometimes for several hours. No after-hemorrhage has ever been observed in any instance, and need not be feared. Suprarenin is readily soluble in water, can be sterilized by boiling, and the solutions should be made with physiologic salt solution. The injections are not painful, but if desired they may be preceded or accompanied by local anesthesia. He found for general use that the best syringe was one with a capacity of 5 c.c. and a very long, thin needle. For the liver he prefers a blunt needle with an opening in the side. In his clinical experience with the suprarenin he found that the anemia was not so rapidly induced in inflamed as in sound tissues, but the extreme limits are given in the above figures. He is now engaged on similar research with adrenalin.

91. Biologic Blood Test.—Hauser's attempts to produce a powerful prepared serum for this test were so successful that the serum displayed such intense action that it agglutinated all kinds of blood to which it was applied. Consequently he, warns that the purpose of the test is defeated if the serum is brought to such a high pitch of efficiency. Parallel tests with various kinds of blood should always be made at the same time. Microscopic examination of the blood should not be neglected, and can be made after the biologic test has been applied, using the sediment when the quantity of the blood is minimal. The reaction may be studied as it occurs in capillary tubes. He prefers a serum of a strength which renders the fluid turbid in less than half an hour, in the proportion of 1/30, while the other blood samples are still clear after six hours and show only traces of a flaky deposit by the end of twenty-four hours. He describes other technical points learned in his experience.

92. Forensic Differentiation of Human and Animal Blood.—Marx and Ehrnrooth suggest that the rapid agglutination

which follows when a foreign serum is added to a solution of human blood may prove useful for the differentiation of blood. When human serum is added to the blood the red corpuscles show very little if any effect, but when a foreign serum is added the red corpuscles become agglutinated in clumps nearly at once, and pile up with evidences of pronounced hemolysis. They proceed by dissolving the blood on an object glass with one or more drops of .6 per cent. salt solution to make a concentrated solution. They then draw a drop of blood from the finger tip and stir it into the dissolved blood. It is then examined under the microscope during the next fifteen minutes. In case of fresh blood the reaction occurs in a few seconds, but a few minutes may be required when the blood is several months old. They think that this method of differentiation will prove useful as a control test for the biologic method, or possibly substitute it.

93. **Prophylaxis of Ophthalmia Neonatorum.**—Dauber pleads for the compulsory use of the Credé instillations and the prompt notification of every case of eye affections in infants.

94. **Joint Formation as an Aid to Healing of Apical Lesions.**—Hofmann has examined 77 cadavers to corroborate Freund's statements in regard to the value of a movable joint in the cartilage of the first rib as a factor in the prevention and cure of pulmonary tuberculosis. Freund's communication was summarized in THE JOURNAL, XXXIX, p. 170. He noticed that the first costal cartilage was exceptionally short and rigid in 30 cases of pronounced tuberculosis, while in the healed cases there was a movability amounting to an actual joint formation in some. He, therefore, suggested the severing of the first costal cartilage to give the lung more space, in cases of recurring apical affections. Hofmann's experience has confirmed these assertions, and he even goes beyond Freund in advocating the severing of the cartilage as a still earlier precaution, not waiting for the disease to progress to such lengths. He also states that the joint can be made as far along as at the junction of the cartilage and rib. The benefits of the chondrotomy are not restricted to abnormally short cartilages, but the operation is destined to aid in every case, as air and oxygen can reach the apex more freely, and the lung can expand better and aspirate larger quantities of blood into the apex.

Vratchebnaya Gazeta, St. Petersburg.

101 (XI, No. 1.) *Blood in Rötheln. N. Tchistovitch and O. A. Shestakova.—O morphologitcheskikh izmeneniyakh krovi pri krasnukhye.

102 Contrast Obsessions in Melancholia. S. Sukhanoff.—O navyastchivykh psychitcheskikh sotchetaniyakh po contrastu pri melancholitcheskikh sostoyaniakh. One case.

103 *Thyroid Treatment in Eclampsia. V. G. Baldovsky.—2 slutchayn letcheniya eklampsia ekstractom shtchitovidnoi shelezy.

104 *Arrhenal in Malaria. I. N. Kavaleroff.—Nabliudeniya nad dyestviem arrenala pri bolotnoi likhoradkye.

105 (No. 2.) Study of Action of Arsenic. I. M. Dogiel.—Nyekotorie preparaty myshyaka po otnoshenilyu ikh k shevotnomu organizmu.

106 Nine Cases of Foreign Bodies or Rhinoliths in Nose. S. Preobrashenasky.—9 slutchaev, etc. (Commenced in No. 1.)

107 Physiologic Sexual Life Among the Kirghish Peoples. V. V. Vasilief.—Nabliudeniya nad physiol. proyavleniyami polovoi zhizni u kirgisok.

108 (No. 3.) Certain Psycho-Physical Traits in Criminals. N. S. Lobas.—Nyekotoriya tcherty iz psycho physiki prestupnikov. (Commenced in No. 1.)

109 Case of Achylia and Peritonitis with Adhesions Consecutive to Contusion of Abdomen. S. A. Bobovitch.—K voprosu o traumatitcheskikh zabolyevaniyakh zheludka. (Commenced in No. 2.)

110 Eighty-seven Text-books Examined from the Standpoint of the Hygiene of the Eye. I. Eliasberg.—(Po sposobu prof. H. Cohn'a).

111 O desinfectionnom apparata i gazye Clayton'a. P. O. Smolensky.

101. **Blood in Rötheln.**—The blood was either quite normal or showed merely slight leucocytosis with mononuclear neutrophiles predominating, in the 4 children examined.

103. **Thyroid Treatment in Eclampsia.**—The success of thyroid treatment in the 2 cases reported completely confirms Nicholson's statements in regard to the efficacy of thyroid extract in this affection. Baldovsky found that the convulsions abated under its influence, while it also regulated the eliminating functions of the kidneys. The urine increased in quantity, and the proportion of albumin rapidly diminished. He used narcotics in combination with it, and recommends this practice as they keep the convulsions in check. His dosage was the same as Nicholson's, a .3 gm. tablet of thyroidin three or four times a day. The curves appended show the prompt benefit derived. The albumin nearly vanished in the first case within four hours of the second dose, which had been given two hours after the first one, dropping from more than 4 to a proportion of less than .5.

104. **Arrhenal in Malaria.**—Gautier's sodium cacodylate method of treating malaria has been found extremely effectual by Kavaleroff. He gives the particulars of 22 cases and states that it stands on the same plane as quinin, and possibly even surpasses it for certain cases. It is more effectual in recent infection.

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112 (II, No. 33.) *K utcheniyu Addison'ovoi bolyezni (disease). N. N. Darkshevitch.

113 *Cocain Anesthesia. A. P. Krimoff.—Nyeskolko slov po povodu myestnago obezbolevaniya cocainom.

114 (No. 34.) Study of the Reduplicated Heart Sounds. V. P. Obraszoff.—O razdvoenayk i pribavotchayk tonakh serdtsa pri nepovredotvennom ego vyzlushivanii. (Concluded.)

115 *Operative Treatment of Fractured Patella. N. N. Vesselovsoroff.—K voprosu ob operat. lyetchenii perelomov nadkolyennoi tchashki.

116 Pokheshaya na syezzayu palotchka conjunctivita (Bacillus conjunctivitidis subtiliformis). I. A. Michalski. Found in 50 cases.

117 *Ligature of Saphena for Varicose Veins. P. S. Tentchinski. O koreannom lyetchenii varicoznykh rasshirenii ven nizhnikh konetchnosti po sposobu Trovyanova-Trendelenburg'a.

118 (No. 35.) Alexins in Relapsing Fever. A. A. Meikhk and I. V. Kaliapine.—O sodershanii alexinov pri vosvratnoi goryatchkye.

119 Case of Multiple Sclerosis. Y. F. Kaplan.—Slutchai mnozhestvennago sklероza s preobladayushtchim porashenyem psychiki, etc.

120 *New Method of Operative Treatment of Uterine Cancer. M. A. Straukh.—O novyushem operativnom vmyeshatelstvye pri rakye matki.

121 *Floating Liver and Heart Disease. M. I. Stern.—Blizhdayushtchaya potchen v svyazi s bolyezniami serdtsa.

122 (No. 36.) Gumma in the Sclerotic. A. V. Lotine.—K voprosu o gummozanykh opukholyakh sklery.

123 (No. 37.) Relations Between Chemical Composition and Therapeutic Action. M. I. Breitmann.—Sootnoshenia mezhdu chemitcheskim sostavom lyekarstv i ikh physiologitcheskim dyestviem.

124 *Biologic Blood Test. P. N. Diatroptoff.—K voprosu ob otlitchiteinom rasposnavanii tchelovyetcheskoi krovi ot krovi shevotnykh v sudebno-medicinskoi praktikye.

125 Peculiar Arrangement of Nissl's Bodies in Certain Cells in the Spinal Cord. A. A. Pievaitsky.—K voprosu raspolozhenii Nissl'ovskago chromatophilnago veshtchestva v nyekotorykh nervnykh klyetotchkakh spinnogo mozga.

126 Bacteriologic Differentiation of Plague in Cadaver. S. I. Goldberg-Zlatogoroff.—O bakt. rasposnavanii tchumy v trupakh. (Commenced in No. 34.)

127 (No. 38.) Measures Against Leprosy. I. I. Hubert.—Organizatsiya borby s prokazoi.

128 Two Cases of Rupture of Laparotomy Scar. A. N. Zimin.—2 slutchaya razryza rubtsa posyle tchrevosyetchenii.

129 Dalnyeishiya nabliudeniya nad lyetchenyem chorei Sydenham's bolshimi kolitchestvami myshyaka (arsenic). M. O. Shaikevitch.

130 Actinomycosis atypica pseudotuberculosa. Streptothrichosis hominis autorov. I. A. Shabad. (Commenced in No. 36.) One case.

131 The Recent Tendencies in Artificial Feeding of Infants. S. A. Baraki.—Novia tetchenlya v voprosu ob iskusstvennom vskarmlivanii dyetoi. (Commenced in No. 36.)

112. **Addison's Disease.**—Scraps of skin contributed voluntarily by a young man suffering from Addison's disease were examined by Darkshevitch to determine the changes causing the pigmentation. The findings were not materially different from those observed in similar tissues in the cadaver. The pigment granules did not give the reaction for iron.

113. **Local Cocain Anesthesia.**—Krimoff reports that in both experimental research and the clinic much better results are obtained with pasteurized solutions of cocain than with those sterilized by boiling, and also with a 1 per cent. strength than with a stronger solution. He dissolves the cocain in sterile water and pours the fluid into glass tubes which are fused and then heated to 60 C. for three hours. In operating and in experiments on animals the anesthesia induced with cocain thus prepared lasted an hour or two, while twenty to thirty minutes was the limit with a solution sterilized by heating to 100 C., that is, boiled. He advocates local anesthesia as peculiarly adapted for herniotomies. He injects the cocain along the course of the incision, using six or seven syringefuls, and injecting from one-half to three-quarters of a syringeful at the point where the ileo-inguinalis nerve emerges, introducing

the needle deep into the tissue. He has thus operated on a number of cases of inguinal hernia with complete success, and no dread of the vomiting liable to follow chloroform. He analyzes the results obtained with various concentrations in 155 different operations. They demonstrate conclusively that cocain once boiled loses considerable of its anesthetizing power, and the anesthesia is much less durable than when a 1 per cent. solution is pasteurized, that is, kept at 60 C. (140 F.) for three hours.

115. **Fracture of Patella.**—Twelve cases are reported to demonstrate the advantages of suturing the bone, and to emphasize the fact that the final success of the intervention depends fully as much on the management after the operation as on the operation itself. By the tenth or twelfth day, if everything is proceeding favorably, the splint is removed and a lighter one is applied, reaching from the middle of the thigh to the middle of the leg, and the entire limb is subjected to systematic massage, with electricity if the condition of the muscles requires it. Passive movements should be commenced between the twentieth and thirtieth day, exclusively by the physician, and the patient then allowed to get up.

117. **Varicose Veins in the Army.**—Tentchinski concludes from extensive experience among the troops at Vladivostok that new recruits with even slight degrees of varicose veins in the legs should not be accepted for military service if the saphena magna is painful from this cause. Such a condition is liable to become acute and finally severe and chronic, necessitating the dismissal of the recruit. Even with the best of wills it is impossible for him to do military service during a severe attack. Another reason for rejection is that varicose veins are usually a sign of some constitutional affection or tendency to arteriosclerosis or neuritis. He believes that the saphena magna is first affected, the trouble being some disturbance in its valves. This not only reduces the functions of the limb but affords a predisposition to infectious processes. He operated on 21 patients, with a complete cure in 67 per cent. He describes considerable research likewise on the cadaver to better locate the saphena. He followed the Troyanoff-Trendelenburg technic.

120. **Uterine Cancer.**—Straukh operated on 5 patients by the Mackenroth method, on 8 by the Wertheim, and on 7 by a method which is practically a combination of the other two. It aims to remove the lymphatic glands with the neoplasm more completely than is possible by other technics. He removes the growth through the vagina and cauterizes the raw surfaces with the Paquelin. The patient is then placed in the Trendelenburg position and the abdomen opened. The uterus is ablated and the posterior part of the vagina is sutured to the posterior sheet of the peritoneum. The latter is then drawn up on each side and careful search made for all glands, removing all the accessible ones, and concluding the intervention by drainage through the vagina. Three of the 20 patients died from septicemia and 2 from casual causes, but none in the group operated on by his method nearly two years ago. All are in good health to date.

121. **Floating Liver in Heart Disease.**—The congestion produced by a severe cardiac affection entailed secondary displacement of the liver in the case described. Stern thinks that the venous stasis in such cases is liable to still further displace an already abnormally movable liver, and is also able to render movable an otherwise normal liver. The movability of the liver is liable to have in turn an unfortunate influence on the heart. His patient was a man of 63, who had previously had three attacks of angina pectoris. The dragging of a heavily congested liver was evidently causing serious heart disturbances. There was resonance instead of dullness over the usual liver area, accompanied by severe, colicky pains and paroxysmal heart symptoms. The patient died with symptoms of disturbed cardiac compensation. Bruschini, he states, was the first to call attention to the mutual relations between heart disease and floating liver, reporting two cases of their coincidence and pointing out the connection between them.

124. **Biologic Blood Test.**—The value of this test is extolled by Diatroptoff, who mentions a recent forensic case in which its testimony was of decisive import. The judge and experts were taken to the laboratory and inspected the results of the tests half an hour after the specific serum had been added to the blood stains. He emphasizes, however, that after thirty hours bacterial action is liable to induce a turbidity which might prove misleading unless forewarned. If the tubes are to be kept for examination later he found that a drop or two of chloroform, added at the outset, prevented this bacterial action.

Books Received.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

THE AMERICAN YEAR-BOOK OF MEDICINE AND SURGERY FOR 1904. A Yearly Digest of Scientific Progress and Authoritative Opinion in All Branches of Medicine and Surgery, Drawn from Journals, Monographs and Text-Books of the Leading American and Foreign Authors and Investigators. Arranged, with Critical Editorial Comments, by Eminent American Specialists, Under the Editorial Charge of George M. Gould, A.M., M.D. In Two Volumes. Volume I, Including General Medicine. Pp. 673. Fully Illustrated; Volume II, General Surgery. Pp. 686. Fully Illustrated. Cloth. Price, per volume, $3.00 net. Philadelphia, New York, London: W. B. Saunders & Co. 1904.

AN ATLAS OF HUMAN ANATOMY, for Students and Physicians. By Carl Toldt, M.D., Professor of Anatomy in the University of Vienna. Assisted by Prof. Alois Dalla Rosa, M.D. Translated from the Third German and Adapted to English and American and International Terminology. By M. Eden Paul, M.D., Brux., M.R.C.S., L.R.C.P. Third Section. D. Myology. (Figures 490 to 640 and Index.) Cloth. Pp. 140. New York: Rebman Co.; London: Rebman, Limited. 1904.

EXPERIMENTS CONCERNING TUBERCULOSIS, Under the Supervision of the Biochemic Division. Part I. The Virulence of Human and Bovine Tubercle Bacilli for Guinea-Pigs and Rabbits. By Marion Dorset, M.D., Assistant Chief of Biochemic Division, Bureau of Animal Industry. Paper. Pp. 29. Washington: The Government Printing Office. 1904.

PREVENTIVE MEDICINE. Two Prize Essays. The General Principles of Preventive Medicine. By W. Wayne Babcock. The Medical Inspection of Schools: A Problem in Preventive Medicine. By Lewis H. Somers, M.D. Paper. Pp. 54. Published for Gratuitous Distribution to the Medical Profession by The Maltine Company, Brooklyn, N. Y.

UNIVERSITY OF CALIFORNIA PUBLICATIONS ON THE PRODUCTION AND SUPPRESSION OF GLYCOSURIA IN RABBITS THROUGH ELECTROLYTES. (Preliminary Communication.) By Martin H. Fischer. Paper. Pp. 2. Berkeley: The University Press.

SUBJECTIVE SENSATIONS OF SIGHT AND SOUND. Ablotrophy and Other Lectures. By Sir William R. Gowers, M.D., F.R.C.P., F.R.S., Hon. Fellow R. Coll. Phys., Ireland. Cloth. Pp. 250. Price, $2.00. Philadelphia: P. Blakiston's Son & Co. 1904.

THIRD ANNUAL REPORT OF THE NEW YORK STATE HOSPITAL FOR THE CARE OF CRIPPLED AND DEFORMED CHILDREN for the Year Ending Sept. 30, 1903. Hospital Located at Tarrytown, N. Y. Paper. Pp. 28. Albany: J. B. Lyon Co. 1904.

ANNUAL REPORT OF THE SURGEON GENERAL OF THE PUBLIC HEALTH AND MARINE-HOSPITAL SERVICE OF THE UNITED STATES for the Fiscal Year 1903. Paper. Pp. 487. Washington: The Government Printing Office. 1903.

DIOXOGEN. A Monograph Descriptive of Its Physical and Chemical Properties, Therapeutic Action and Uses in Medicine, Surgery, Dentistry and Hygiene. Paper. Pp. 31. New York: The Oakland Chemical Co. 1904.

ANNUAL REPORT OF THE DEPARTMENT OF HEALTH, Niagara Falls, N. Y. For the Year 1903. Submitted by Carl G. Lee-Wolf, M.D., Health Officer. Paper. Pp. 30. Niagara Falls, N. Y.: Gazette Press.

SURGICAL NOTES FROM FOUR CONTINENTS AND WEST INDIES. By Nicholas Senn, M.D., Ph.D., LL.D., Head of Department of Surgery, Rush Medical College. Cloth. Reprints from American Medicine.

FOURTEENTH ANNUAL REPORT OF ST. MARY'S HOSPITAL, Rochester, Minn., for the Year 1903. Conducted by the Sisters of St. Francis. Paper. Pp. 29. Rochester, Minn.: Daily Bulletin Print. 1904.

CREIGHTON MEMORIAL ST. JOSEPH'S HOSPITAL, OMAHA, NEB. Twenty-fourth Annual Report for the Year Ending Dec. 31, 1903. Paper. Pp. 40. Omaha: Press of Buckley Printing Co.

REPORT OF THE SELECT COMMITTEE ON VENTILATION, Appointed by the House of Commons (Blue Book, 1903). Paper. Pp. 81. Price, 1 shilling. London: Hickson, Ward & Co. 1904.

TRANSACTIONS OF THE LUZERNE COUNTY MEDICAL SOCIETY, for the Year Ending Dec. 31, 1903. Volume XI. Paper. Pp. 182. Wilkesbarre, Pa.: E. B. Yordy Co.

BELLEVUE AND ALLIED HOSPITALS, CITY OF NEW YORK. First Annual Report. Jan. 1, 1902, to Dec. 31, 1902. New York: Martin B. Brown Co. 1903.

THE MAN WHO PLEASES AND THE WOMAN WHO CHARMS. By John A. Cone. Cloth. Pp. 131. Price, 75 cents. New York: Hinds & Noble.

NINETEENTH ANNUAL REPORT OF THE ADIRONDACK COTTAGE SANITARIUM, Saranac Lake, New York. November, 1903. Paper. Pp. 15.

MEDICAL UNION NUMBER SIX. By William Harvey King. Cloth. Pp. 58. Price, 35 cents. New York: The Monograph Press. 1904.